

# CALIFORNIA AND WESTERN MEDICINE

OFFICIAL JOURNAL OF THE CALIFORNIA MEDICAL ASSOCIATION

VOL. 57

SEPTEMBER, 1942

NO. 3

## California and Western Medicine

Owned and Published by the  
CALIFORNIA MEDICAL ASSOCIATION  
Four Fifty Sutter, Room 2004, San Francisco  
Phone DOuglas 0062

Address editorial communications to Dr. George H. Kress as  
per address above. Address business and advertising commu-  
nications to John Hunton.

EDITOR . . . . . GEORGE H. KRESS

*Committee on Publications*  
George W. Walker (Chairman) . . . . . Fresno 1943  
F. Burton Jones . . . . . Vallejo 1944  
Francis E. Toomey . . . . . San Diego 1945  
Secretary and Editor ex officio

*Editorial Board*  
Roster of Editorial Board appears in this issue at beginning of  
California Medical Association department. (For page  
number see index below.)

*Advertisements.*—The Journal is published on the seventh of  
the month. Advertising copy must be received not later than the  
fifteenth of the month preceding issue. Advertising rates will  
be sent on request.

BUSINESS MANAGER . . . . . JOHN HUNTON

Advertising Representative for Northern California  
L. J. FLYNN, 544 Market Street, San Francisco (DOuglas 0577)

Copyright, 1942, by the California Medical Association  
Subscription prices, \$5 (\$6 for foreign countries); single  
copies, 50 cents.

Volumes begin with the first of January and the first of July.  
Subscriptions may commence at any time.

*Change of Address.*—Request for change of address should give  
both the old and the new address. No change in any address on  
the mailing list will be made until such change is requested by  
county secretaries or by the member concerned.

*Responsibility for Statements and Conclusions in Original  
Articles.*—Authors are responsible for all statements, conclusions  
and methods of presenting their subjects. These may or may not  
be in harmony with the views of the editorial staff. It is aimed  
to permit authors to have as wide latitude as the general policy  
of the Journal and the demands on its space may permit. The  
right to reduce or reject any article is always reserved.

*Contributions—Exclusive Publication.*—Articles are accepted  
for publication on condition that they are contributed solely to  
this Journal. New copy must be sent to the editorial office not  
later than the fifteenth day of the month preceding the date of  
publication.

*Contributions—Length of Articles: Extra Costs.*—Original  
articles should not exceed three and one-half pages in length.  
Authors who wish articles of greater length printed must pay  
extra costs involved. Illustrations in excess of amount allowed  
by the Council are also extra.

*Leaflet Regarding Rules of Publication.*—CALIFORNIA AND  
WESTERN MEDICINE has prepared a leaflet explaining its rules re-  
garding publication. This leaflet gives suggestions on the prepa-  
ration of manuscripts and of illustrations. It is suggested that  
contributors to this Journal write to its offices requesting a copy  
of this leaflet.

## DEPARTMENT INDEX

(Itemized Index of Articles is printed on Front Cover)

	PAGE
Editorials . . . . .	169
Editorial Comment . . . . .	173
Original Articles: Scientific and General . . . . .	176
California Medical Association . . . . .	201
California Committee on Participation of the Medi- cal Profession in the War Effort . . . . .	201
Committee on Legislation (Basic Science) . . . . .	208
Committee on Medical Economics . . . . .	209
Committee on Postgraduate Activities . . . . .	211
Committee on Public Health Education . . . . .	213
Committee on Hospitals, Dispensaries and Clinics . . . . .	213
Committee on Associated Societies and Technical Groups . . . . .	214
Committee on Publications (Medical Writing) . . . . .	214
County Societies: Membership; In Memoriam . . . . .	215
California Physicians' Service . . . . .	216
Miscellany: News; Press Clippings . . . . .	217
Medical Jurisprudence . . . . .	222
Letters . . . . .	223
Nominees for California Legislature . . . . .	224
Twenty-Five Years Ago; State Examining Board . . . . .	226

## EDITORIALS

### ON SENDING MEDICAL JOURNALS TO PHY- SICIANS ATTACHED TO STATION HOSPI- TALS OF ARMY AND NAVY CAMPS IN CALIFORNIA

A Request for Coöperation Addressed to  
Physicians in Civilian Practice

**Publicity Concerning Military Equipment is  
Censored.**—Military regulations relating to  
publicity concerned with Army, Navy and Air  
Force camps forbid the publication of informa-  
tion that could be of use to enemy forces. In the  
subject here to be discussed, it is therefore not  
possible to give detailed data concerning Army  
and Navy camps in California or other Pacific  
Coast States.

It is permissible to state that many Army, Navy  
and Air Force camps are in active operation in  
California, each possessing its full complement of  
medical officers, in a ratio of about 6 or 7 physi-  
cians to every 1000 men. For an index, it need  
only be remembered that California's quota of  
physicians who are to go into the armed forces by  
the end of the year 1942 has been estimated to be  
2600, as already stated in Colonel Seeley's letter,  
printed on page 2, of the July issue of CALIFOR-  
NIA AND WESTERN MEDICINE.

\* \* \*

**Colleagues in Military Service Discontinued  
Subscriptions to Medical Journals.**—Members  
of the California Medical Association who are in  
civilian practice at the present time are requested  
to remember that when local colleagues recently  
entered service with the armed forces, it was  
practically necessary for most of these physicians  
to give up medical journal subscriptions—be-  
cause, even if the publications were continued,  
there was no assurance of delivery of such second  
class mail, since the continental and overseas  
assignments of physicians to station hospitals and  
camps are being changed with great frequency.

As a consequence, in some camps the amount  
of medical literature in evidence is so small that  
many of these physicians, with more time than  
usual on their hands—after routine military  
duties have been performed—are practically  
starving for publications that could keep them in  
touch with current medical progress.

\* \* \*

**How Can Military Colleagues Receive Medi-  
cal Publications?**—Such being the facts, what  
are the measures which can be instituted and  
through which, the conditions may be improved?

The procedures outlined below are submitted by the C. M. A. Committee on Postgraduate Activities since, under existing conditions—owing to the many extra demands on teachers and other speakers—the refresher courses, heretofore arranged for county societies and districts, are now no longer available.

\* \* \*

**The Plan for Supplying Literature—In More Detail.**—The proposed plan comprehends the contribution of medical publications by physicians in civilian practice, after they, themselves, have had an opportunity to read the journals—using for the collection of material, the three medical libraries of California (U. C.; Stanford; Los Angeles County Medical Association), as the major collection and distribution centers.

Hospital libraries and county medical societies can participate in the work by collecting journals from staff and society members, and forwarding such—as *fourth class mail, or if more than eight ounces, via parcel post*—to one of the three library depots mentioned above.\* It is believed that donation of magazines will be given by physicians.

After receiving the material, the libraries of the three institutions will carry on, according to arrangements made with the C. M. A. Postgraduate Committee; the California Medical Association covering the postage and incidental expenses involved in forwarding the literature. Further comment concerning these details may be here omitted.

In each month's issue of CALIFORNIA AND WESTERN MEDICINE—in the department, "Committee on Participation of the Medical Profession in the War Effort"—will appear a "reminder item" to members of the California Medical Association, to continue the contribution of medical journals.

\* \* \*

**First Steps in This Plan of Coöperation: How Members, County Societies and Hospital Staffs Can Aid.**—To create a beginning for this work, an appeal is herewith made to members of the California Medical Association to look over the medical journals received since January, 1942 that yet remain on their shelves, with the view of forwarding many such to one of the three library depots.

Request is also made that the President or Secretary of each county medical society, and the chief or librarian of each hospital staff call the attention of their respective groups to this effort to be of service to confreres now in military service. Coöperative endeavor on the part of every hospital staff or county society member is solicited.

Certainly, what is asked is little enough, in the way of appreciative token, to indicate to our fellows who are in the armed forces that physicians still at home keep them in mind; and that

they are willing, at least in small degree, to give expression to their kindly thought.

If the plan, as above outlined, does not fit in with the convenience of some readers, then such members are to feel free to send the medical journals to the C. M. A. Postgraduate Committee, 450 Sutter, San Francisco, where the Association Secretary will be glad to follow on.

\* \* \*

**Little Enough is Being Requested.**—Readers are requested to visualize how they would feel if they were suddenly thrust from busy civilian practices and environments into service with the armed forces—with much strange routine procedure of a military nature, but little or no medical literature to keep them abreast on newer work, or facilities to maintain contacts with civilian practice.

Certainly what is here asked is little enough on the part of those of us who still remain at home. However, if that little to us means much to our colleagues who have already answered the call of our Country, we, who yet remain behind, must not be found wanting.

\* \* \*

**The Plan: In Recapitulation.**—To summarize:

(1) Check over your medical journals (CALIFORNIA AND WESTERN MEDICINE included), and send them to one or other of the three medical library depots whose addresses have been given in a preceding footnote, or to the C. M. A., at 450 Sutter, San Francisco.

(2) If such procedure is not convenient, ask your county medical society or your hospital group to do this for you. For convenience of members, have your hospital group place a box, properly labeled, for such journals in the staff reception room.

(3) From month to month, and from now on, or until other notice is served, keep up this good work. It is important. By so doing, you will have the consciousness of knowing, in small part, at least, that you have backed up your good and kindly words to colleagues who are in military practice, by a practical expression of real interest and aid.

\* \* \*

**Military Colleagues Will Again Return to Civilian Practice.**—Do not forget: These colleagues will be coming back to us again, one of these days, to start all over in the task of building up of private practices. Let us, each and every one of us, do our bit, in making that day of return more hopeful for our brothers at the front, than it may, at times, to them, seem to be.

A well trained physician, who keeps alert, will always be able to make a place for himself. We owe it to these California and other colleagues who are in military service, that we aid them in keeping themselves in touch with medical progress and practice.

Reader, your help in this will contribute toward that end.

You are counted on to do your part!

\* Addresses of the California Medical Libraries:  
U. C. Medical Library, The Medical Center, 3rd and Parnassus, San Francisco, California.  
Lane Medical Library, Clay and Webster Streets, San Francisco, California.  
Los Angeles County Medical Library Association, 634 South Westlake, Los Angeles, California.

## ON VARIOUS TOPICS

California's Proposed Basic Science Law,  
Proposition Number 3

## Candidates for the State Legislature

Female Employees in Physicians' Offices—Welfare  
Commission Hearing on Wage SchedulesChauncey D. Leake of U. C. Medical School Goes to  
University of Texas Medical School"Parergon," Meaning "Work by the Side of Work"—  
100-Page Brochure Portraying the Artistic  
Creations of Doctors of Medicine

**Proposition Number Three: Basic Science Initiative—Its Purpose and Scope.**—In the July issue of the OFFICIAL JOURNAL, on pages 4 and 100, and in the August number, on page 153, comment was made concerning the proposed initiative law that, in one sense, is only an addition to the licensure statutes of the three healing-art groups recognized in California—(1) non-sectarians or regulars; (2) osteopaths, and (3) chiropractors—the attention of members of the California Medical Association being called to the heavy obligation resting on every physician to educate his lay fellow citizens on the need of such a law, and to vote YES thereon at the November 3d State election.

The justification for the law, now being proposed, rests on the simple proposition that human health and life are little less than sacred; and that it should be a fundamental obligation of every commonwealth to safeguard its citizens from incompetent or poorly-trained practitioners of the healing-art, no matter to what group they may belong.

The proposed initiative law is not retroactive; it does not imperil in any way the status of healing-art practitioners who are already licensed by the State of California, nor will it, in any manner, interfere with the right of a citizen to call into service the healing-art practitioner of his own choice.

The basic science education demanded—in anatomy, physiology, biochemistry, bacteriology and pathology—can be acquired from any source whatsoever; that is, in any healing-art school or liberal arts college or university, or through private or self-instruction.

The certificate to show that an applicant for a healing-art license has passed the Basic Science Board examination need not be obtained prior to entering a healing-art school; but can be secured at any date prior to taking the healing-art examination proper, that is, even at the end of his healing-art course. Ample time, therefore, is given to acquire this basic education.

**Licensure is mandatory for many professions and vocations.**—For many occupations and professions, the State has laws to determine whether the individuals, who desire to pursue such, have had sufficient education and other training to indicate that they would be persons to whom could be safely entrusted the responsibilities involved.

If standards of education, then, are set for

plumbers, architects, and other groups, surely, as regards human health and life, the State, having a very special obligation to protect its citizens from incompetent practitioners of the healing-art, must be at liberty to establish similar standards for the practice of medicine.

Basic Science laws, now existing in some sixteen commonwealths and the District of Columbia, are a means to that very end. The objective is most worthy.

**Physicians must inform patients and friends.**—The Basic Science Initiative (Proposition Number 3) will be on the November 3d ballot and will be approved by the electorate; *provided*, the Doctors of Medicine now practicing in the State of California will educate their patients and friends on the desirability of this beneficent measure.

The above thoughts were indicated, perhaps in other words, in the comments which appeared on page 4 of the August CALIFORNIA AND WESTERN MEDICINE, and are again presented because of their great importance. Since these war-times bring about unstable conditions, it is difficult to make forecasts, as in days of peace, especially in regard to elections. Therefore, all the more reason to be on the alert.

To repeat: Talk PROPOSITION NUMBER 3 to your patients and friends, and ask them to vote, YES, thereon.

With concerted effort, the proposed statute will be approved by the electorate. If, however, the members of the medical profession fail to actively espouse Number 3, the proposition may go down to defeat. That, indeed, would be a calamity not only for the present, but for the days to come.

**Candidates for the State Legislature.**—Elsewhere in this issue appears a tentative list of candidates for the California State Legislature, whose names will appear on the November 3d State election ballot.\* In the minds of physicians, members of the Legislature, as a class, should be differentiated from other citizens, because State Senators and Assemblymen—with the Governor—are the law makers of the Commonwealth. If, individually and collectively, they believed in and would support legislation that makes for best promotion of the public health and the maintenance of the standards of scientific medicine, physicians could almost forget the necessity of remaining interested in the proceedings of the biennial legislative sessions. However, since experience has shown that a considerable number of Legislators may be expected to hold views not conducive to best public health conservation, it follows that Doctors of Medicine must maintain a proper orientation of what is transpiring in the legislative halls at Sacramento. In last month's issue (August CALIFORNIA AND WESTERN MEDICINE, on page 116), attention was called to the "Final Election and the Course of Action" in regard thereto. Readers who failed to note the item

\* See page 224.

may wish now to refer to it. In the days ahead, up to Tuesday, November 3d, physicians have an opportunity to know who are the Senatorial and Assembly candidates from the districts in which they vote, and to learn what are the reactions of the different candidates concerning public health standards.

With such knowledge at hand, physicians should know for whom to cast their ballots.

**Female Employees in Physicians' Offices: Industrial Welfare Commission Hearing on Wage Schedules.**—On page 209 of this issue will be found the text of a statement presented by the Association to the Office Wage Board of the State Industrial Welfare Commission, relative to the wages and hours of female employees in physicians' offices. A letter on the same subject, from a dental colleague, appears on page 223.

The Wage Board is considering the matter of setting new maximum hours and minimum wages for female and minor employees in business and professional offices. Existing wage and hour orders of the Industrial Welfare Commission call for a maximum of 48 hours' work per week and a minimum wage of \$16 a week. What new standards may be set by the present Wage Board we will doubtless learn in the course of the next few months.

Criticism has been heard in some places of the long and irregular hours that some office employees of physicians are asked to maintain. Additional criticism has been heard of the relatively low wages paid some such employees.

The Association's statement on these matters, based partially on common knowledge and partially on a spot survey made by the central office, refutes this type of criticism. However, it must be recognized that in some medical offices the demands on office employees are considerable for the amount paid in wages. It might be well at this time, when war has added greatly to prices, when taxes on incomes and on all purchases have increased sharply, when the temptation to step into a "soft spot" at high wages is great in the minds of medical office employees, to ponder this matter.

**Chauncey D. Leake, of U. C. Medical School Goes to University of Texas School of Medicine.**—Chauncey D. Leake, Ph. D., director of the U. C. Pharmacologic Laboratory, has decided to accept the teaching and administrative position tendered him by the Regents of the University of Texas. What California loses through this change, will be gained by the University of Texas Medical School.

Doctor Leake has made many friends in California and his genial presence will be greatly missed in C. M. A. Postgraduate conferences, in the promotion of which he has so willingly served. The promise has been secured from him that he will continue to forward his comment on "Pharmacological Items of Potential Interest to Clinicians," which have been appearing in the Miscel-

lany department of CALIFORNIA AND WESTERN MEDICINE. Doctor Leake has the good wishes of California friends as he takes up his new work in the Lone Star State.

**"Parergon," Meaning "Work by the Side of Work": A 100-Page Brochure Portraying the Artistic Creations of Doctors of Medicine.**—Physicians who have received copies of the Mead Johnson & Co. brochure from the Condé Nast Press, portraying oil, pastel, water color, sculpture, photographic and other artistic efforts of members of the medical profession, must have been surprised at the large number of contributors from California. For the information of CALIFORNIA AND WESTERN MEDICINE readers, a list of the California physicians whose names appear on "Parergon" is given in this issue, on page 219.\*

An interesting foreword and other comment appears on the covers of the brochure. Many of the 96 pages contain as many as six illustrations of different types of work by medical artists. If special reference is permissible, it would be to mention the illustration of the sculptured head of the late Joseph Pomeroy Widney, M. D., who was the motivating spirit in the group of founders of the Los Angeles County Medical Association.

That the work of some seventy-five California physicians is shown in the illustrations should be a legitimate source of pride for C. M. A. members. At the Coronado annual session and at Del Monte, some two years ago, the California Physicians' Art Association presented displays. For several years, artist members of the Los Angeles County Medical Association have held annual exhibits. These comments are made to congratulate the colleagues whose names appear elsewhere, and who have exhibited their artistic efforts in the displays referred to. It is to be hoped the good work will continue.

The following paragraphs, from the foreword in "Parergon" should be of interest:

"Reverting to the introductory expressions of astonishment and delight at the capabilities of the contemporary physician in the realm of the fine arts, these may be explained, apart from the traditional background, by the fact that he deals with that most exquisite form of divine art and beauty, the human body.

"The same skill that makes the surgeon's fingers deft with scalpel and ligature is at work in the exquisite sculpture and carving represented in this book. The eye that so quickly and accurately evaluates differences in color and texture between normal and pathologic tissue coordinates the hand that wields the painter's brush.

"The man who is attracted by medicine as his life's work is largely motivated by a love for his fellow man, else he would choose a vocation offering greater monetary reward. He starts with, or very early acquires, keen observation, manual dexterity, constructive imagination, sympathetic understanding, philosophy and reverence, all of which are the very essence of art."

\* "Parergon" has been brought off the press by Mead Johnson and Company of Evansville, Indiana. The brochure gives the address of the American Physicians' Art Association as Flood Building, San Francisco, Francis H. Redewill, M. D., Secretary.



## EDITORIAL COMMENT†

## DUPLEX ANTIGENS

Data, suggesting that a single protein molecule may stimulate the production of two qualitatively-different circulating antibodies, are currently reported by Smadel<sup>1</sup> and his coworkers of the Rockefeller Institute.

It was shown by Tanaka<sup>2</sup> and Freyer,<sup>3</sup> in 1902-4, that vaccine lymph gives specific flocculation reactions with vaccinia-immune serum. Two soluble antigens were afterwards demonstrated in this lymph<sup>4</sup>: a heat-labile (L) antigenic fraction readily destroyed at 56°C., and a heat-stable (S) fraction resisting heat to 95°C. By cross-absorption tests, Cragie<sup>5</sup> afterwards demonstrated that the same L- and S-antigens are also present in vaccine elementary bodies. There was suggestive evidence that the L- and S-antigens are conjugated, in the elementary body, to form a single protein complex, the so-called "LS-antigen," which is capable of reacting equally well with L- and S-circulating antibodies. It was suggested by Smadel and Rivers<sup>1</sup> that the serologically-active parts of this hypothetical protein conjugate (LS) undergo a series of independent degradations, giving rise to such fractionally-denatured complexes as L'S, L"S, LS', L'S', etc.

This theory of the nature of the natural antigen in elementary bodies is currently tested on vaccine dermal filtrates by the Rockefeller biochemists. Dermal pulp, from cutaneously infected rabbits, was extracted in a 1:50 dilution of standard phosphate buffer solution (pH 7.2). The extract was afterwards freed from cellular debris by centrifugation, followed by Seitz filtration. Electrophoretic analysis of the resulting filtrate demonstrated the existence of four distinct protein fractions. Fractionation was effected by altering the pH of the filtrate, by which means the dermal proteins were separated into three overlapping groups: A, proteins which remained in solution at pH 4.63; B, proteins precipitated at pH 4.63, but soluble at pH 6.31; and C, proteins precipitated at pH 6.31, but soluble at pH 8.56. On reprecipitation both A and C fractions were serologically inert, giving no test-tube reactions with either L- or S-antibody. The original reacting titer of the dermal filtrate, however, was found quantitatively in the B fraction. Physical and chemical studies showed this fraction to be a homogeneous protein, with a molecular weight approximately that of serum globulin. This B-protein is precipitated quantitatively with either L- or S-precipitin, from which they conclude that this natural antigen is "a single molecular substance containing both L- and S-activity."

They found that the L-portion of this native

antigen can be partially (L') or completely (L'') denatured by heat, without serological alteration of the S-portion. By means of enzymic digestion, the S-portion can be similarly degraded (S', S'') without demonstrable alteration of the L-portion. Dissociation of the LS-molecule into free L- and free S-antigen, however, was not demonstrated, the allegedly free L- and S-antigens of previous investigators presumably being L"S, LS", or other unipolar degeneration products.

Demonstration of this duplex antigenic protein is not only a valuable contribution to the current theory of acquired immunity to vaccine virus, but is equally suggestive in numerous other infectious and allergic processes. Thus far allergists, for example, have almost invariably reasoned from the assumed one-to-one, antigen-antibody relationships of classical immunology, in spite of the reported synthesis of numerous "duplex" proteins of "hybrid" antigenicity.<sup>6</sup> For a decade the "emergent evolution" of new or "hybrid" blood specificities has been of speculative interest to geneticists.<sup>7</sup> The dual antigenic molecule of the Rockefeller biochemists, therefore, may also be of basic nonclinical biological interest.

P. O. Box 51.

W. H. MANWARING,  
Stanford University.

## REFERENCES

1. Smadel, J. E., and Rivers, T. M.: Jour. Exp. Med., 75, 151. Shedlovsky, T., and Smadel, J. E.: *Ibid.*, 75, 165 (Feb.), 1942.
2. Tanaka, K.: Centralb. f. Bakt., 32, 726, 1902.
3. Freyer, M.: Centralb. f. Bakt., 36, 272, 1904.
4. Cragie, J.: Brit. Jour. Exp. Path., 13, 259, 1932.
5. Cragie, J., and Wishart, F. O.: Jour. Exp. Med., 64, 819, 1936.
6. Sox, H. C., and Manwaring, W. H.: Jour. Immunol., 22, 237, 1932. Madison, R. R.: Proc. Soc. Exp. Biol. and Med., 32, 641, 1935. Zoet. A. G.: *Ibid.*, 32, 1469, 1935.
7. Irwin, R. R.: Proc. Soc. Exp. Biol. and Med., 29, 850, 1932.

## MALPRACTICE PROPHYLAXIS—MEDICAL DEFENSE\*

A reduction in the number of malpractice actions can be effected only through the development of a strong defense. It is obvious that such actions would be discouraged if plaintiffs consistently failed to obtain favorable judgments.

Of course, it is not to be argued that a doctor who is actually guilty of malpractice should be allowed to go free of any penalty. There are meritorious claims, and these should be settled out of court—preferably before suit has been filed.

Unjustifiable claims, however, should be contested as thoroughly as possible. In such cases it is sheer folly to compromise, on the theory that a slight settlement would be less expensive than the cost of defense. Such a course serves as an

† This department of CALIFORNIA AND WESTERN MEDICINE presents editorial comments by contributing members on items of medical progress, science and practice, and on topics from recent medical books or journals. An invitation is extended to all members of the California Medical Association to submit brief editorial discussions suitable for publication in this department. No presentation should be over five hundred words in length.

\* Third of a series of articles on Malpractice Prophylaxis (Article I, in July issue, on page 7. Article II, in August, on page 121.)

encouragement to others whose claims are not justified. This short-sighted view, which is so common today, is directly responsible for the rapid increase in the number of malpractice claims in some sections of the country. If cases based upon unjust or absurd claims are permitted to receive even a slight profitable return, there will be an incentive to bring more of them.

It is a great temptation for a doctor to rid himself of these nuisance claims by making a small settlement. The unfavorable publicity, the loss of time, and the mental and emotional strain involved in defending a malpractice suit may lead the physician to compromise. But, as is so often the case, the easiest way out of a situation is seldom the best. For the sake of both himself and his colleagues, the doctor should make a determined opposition to any unjustified claim.

The task of defending a malpractice case is one which requires a high degree of specialization, as well as a peculiar aptitude on the part of the attorney. He must be able to understand the medical problem presented in each case; for it is his duty not only to conduct the examination of the case, but also to cross-examine the plaintiff's witnesses, including the medical experts. If the attorney's medical knowledge is so limited that he is unable to comprehend the significance of the testimony, the defense will be seriously handicapped. Moreover, such an attorney would be incapable of the thorough analysis of the medical problem, which must serve as a basis for the construction and development of a sound and practical theory of defense.

The task of handling medical expert witnesses is also one which necessitates specialized training. Unless an attorney possesses an understanding of the psychology of medical expert witnesses, the defendant's own witness may do more harm than good. For one thing, medical experts are often accustomed to having their opinions listened to and accepted as authoritative. They are seldom prepared to be confronted with contradiction or expression of doubt as to their judgment. In addition, the expert may be definitely opinionated; and insistence upon personal preference in medical procedure may do much to injure the case. In many instances, the experts for the defendant have not had sufficient opportunity to discuss the case thoroughly and in a group before the time comes to go into court. In such cases, minor discrepancies may appear in their testimony, even though there is no actual disagreement which is of significance. Nonetheless, any such disparity in testimony is sure to be pounced upon by the plaintiff's attorney, and the effect upon the jury may be definitely prejudicial. Obviously medical experts must be encouraged to be fair and impartial. But they must also be simple and direct, they must employ phraseology which will be understandable to the jury, and they must be able to retain complete self-control under cross-examination which may be deliberately irritating.

Far too many malpractice actions have been lost

through poor defense; this is an aspect of the problem which needs more attention, particularly in areas which have become virtual hot-beds of malpractice actions. Wherever a serious threat is made against a physician, a carefully-prepared procedure should be put into effect. Every phase of the case should be thoroughly investigated by experts. All available witnesses should be interviewed, and all records carefully examined while the case is comparatively fresh. It is particularly important that the physician or physicians who succeeded the threatened doctor in the care of the patient should be interviewed.

On the basis of all this evidence, the justice of the claim should be weighed. If the charge of malpractice seems justified, an attempt should be made to settle the case out of court. If the suit is to be fought in court, meticulous attention must be given to the method which is to be used by the defense in handling the medical facts. It is especially important that these facts be given the best possible sequential presentation. It is for this reason that the defense attorney must be equipped with a competent understanding of the medical problem involved. Far more often than not the defendant physician is too much involved emotionally to be able to give real assistance in the formulation of questions to be asked of medical expert witnesses for either side.

Through the development of a sound, capable and intelligent method of defense it will be possible to effect a reduction in the number of malpractice claims. Therefore, it would be difficult to over-estimate the importance of the way in which such claims are handled. Each step toward the formulation of better defense is a major contribution to malpractice prophylaxis.

6777 Hollywood Boulevard.

LOUIS J. REGAN,  
Los Angeles.

### SULFONAMIDE RESISTANCE\*

For four or five years it has been known that certain bacteria are capable of becoming resistant to the bacteriostatic action of the sulfonamides, a phenomenon similar in many respects to the development of drug-fastness during the arsenotherapy of syphilis. Sulfonamide resistance, at first a test tube curiosity, is rapidly becoming of considerable importance in clinical medicine.

Experimental studies have clarified certain aspects of the development of sulfonamide resistance.<sup>1</sup> Resistance has been demonstrated for many organisms commonly pathogenic for man, including streptococci, staphylococci, colon bacilli, gonococci, and Brucella. *In vivo*, sulfonamide-resistant pneumococci have been developed by serial passage through mice, treated with less than curative doses of sulfapyridine. Organisms made insensitive *in vitro* are also resistant *in vivo*, and vice versa. Although it may be lost when only partially developed, well established resistance is apparently retained indefinitely.

\* From the Department of Medicine, Stanford University School of Medicine, San Francisco, California.

In humans, sulfonamide-resistant organisms have been reported in pneumococcal pneumonia and meningitis, and recently a fatal case of type seven pneumococcal endocarditis has been reported in which the organism became highly resistant to sulfapyrazine.<sup>2</sup> Prolonged contact between the organisms and the sulfonamides seemed necessary for the development of a high degree of resistance in these cases. Insensitive strains of gonococci have been found to respond poorly to sulfonamide therapy.<sup>3</sup> An interesting recent report from England describes wound infections in a plastic surgery ward, caused by resistant hemolytic streptococci (Lancefield Group A, type 12).<sup>4</sup>

Experiments of one group indicated that gonococci were capable of becoming resistant to sulfanilamide, but not to sulfathiazole; but this statement has been challenged by others, who have isolated sulfathiazole-insensitive strains from patients.<sup>5</sup> Quantitative studies indicate that the development of sulfonamide resistance represents an interaction between the organisms and the one common structural unit of all the sulfonamides, namely the p-amino nucleus, and it seems probable that all organisms susceptible to the bacteriostatic action of the sulfonamides are capable of becoming resistant to all of the sulfonamides.<sup>5</sup> It is for this reason that, in subacute bacterial endocarditis, in which prolonged therapy presumably produces a high degree of resistance, changing from one sulfonamide to another causes no beneficial effect.

The future importance of sulfonamide resistance is uncertain. However, since well established resistance is apparently retained indefinitely, it is conceivable that widespread epidemics might be caused by drug fast bacteria. The therapy of infections, due to insensitive organisms, is thus a challenging problem. It is in such situations that the new agents, penicillin and gramicidin, may find their greatest usefulness, especially in superficial infections caused by gram positive organisms. The rôle of pneumococcal serum in destroying resistant pneumococci is not yet known. These and other therapeutic problems have yet to be studied experimentally and clinically. However, from the standpoint of the practicing physician, it is important to realize that the phenomenon of sulfonamide resistance does exist, and the physician should keep it in mind, in treating patients who do not respond to sulfonamides in the usual manner.

2707 Jackson Street.  
2398 Sacramento Street.

WILLIAM M. M. KIRBY,  
LOWELL A. RANTZ,  
San Francisco.

#### REFERENCES

1. Schmidt, L. H., Sesler, C., and Dettwiler, H. A.: *J. Pharm. and Exper. Therapy.*, 74:175, 1942.
2. Hamburger, M. Jr., Schmidt, L. H., Rueggsegger, J. M., Sesler, C. L., and Grupen, E. S.: *J.A.M.A.*, 119:409, 1942.
3. Cohn, A.: *J.A.M.A.*, 119:519, 1942.
4. Francis, A. E.: *Lancet*, 1:408, 1942.
5. Kirby, W. M. M., and Rantz, L. A.: In press.

#### Medical Aid in U.S.S.R. Army

(Continued from Page 200)

Smorodintsev and his staff have made important contributions to the early diagnosis of typhus. Other experiments include work on the sterilization of air and the production of liquid oxygen.

The world of medicine has been enriched by discoveries such as these: A soluble preparation of sulphidine, an x-ray device which facilitates the location of foreign bodies in the human organism, a synthetic oil of balsam, and a method of producing antityphus vaccine in large quantities. Other discoveries are being added constantly.

Doctors serving with guerilla detachments behind the German lines combine medical work with fighting. They have contributed this observation to the art of medicine: that the wounded who were compelled to be continuously on the move progressed more favorably than those who could follow the traditional method of enforced rest. Other surprising revelations have been set forth by Professor A. Bogomolets, president of the Ukrainian Academy of Sciences. This savant claims that man's normal life span should be about 150 years. He and his son have prepared an antireticular cytotoxic serum, small doses of which stimulate the system of connective tissue. Their theory is that the struggle for normal longevity is, in the first place, a struggle for healthy connective tissue. The serum is used for accelerating the knitting of broken bones by producing a stimulating effect on the growth of osteoplasts. Its usefulness has been proven in the treatment of delayed healing of ulcers and in combating infections.

Unfortunately, Bogomolets' interesting studies were interrupted with the sudden invasion of Russia by the German barbarians. All scientific institutions immediately reorganized their work to pursue the only purpose of all scientific institutions and all citizens of Russia, to defend their country until the utter defeat of Nazi Germany, thus contributing to the struggle for democracy for all nations whose very existence, science and culture are threatened. The years of patriotic war have shown that the medical profession of the Soviet Union is productive of bold, daring ideas and indefatigable in research.

450 Sutter.

#### Educational Requirements of Medical Schools

The tremendous demand for physicians made by the military forces has caused the suggestion that the educational requirements of our medical schools be relaxed, so that doctors may be produced in a shorter period of time. If that suggestion was widely followed, one result would be inevitable—a definite decline in the quality of medical service given the American people. The time required for graduation from an accredited school of medicine, coupled with the hard, continuous application required of students, is our best guarantee of adequate service. Before we lower the standards, which are low enough now, an effort should be made to solve the problem. This problem involves the health of the Americans of tomorrow, no less than of those of today.

## ORIGINAL ARTICLES

## Scientific and General

## CLINICAL-PATHOLOGICAL CONFERENCE\*

WALLACE M. YATER, M.D.

Washington, D. C.

AND

ERNEST HALL, M.D.

Los Angeles

DOCTOR GARNETT CHENEY: The meeting will come to order. It has been a long time since Richard Cabot popularized the Clinical-Pathological Conference, which became very popular and highly instructive. Perhaps it is particularly fitting in these times in its truly democratic sort of institution. At a recent conference of this type in San Francisco ten clinical experts were selected to diagnose the cases. Ten experts gave their opinions, and then discussion was permitted from the floor. An intern from one of the hospitals got up and presented a diagnosis that was quite different from that of the ten wise men, and he was the only one who was right in that conference. Now, today we don't have any ten wise men. Fortunately they are all rolled into one in the person of Doctor Wallace Yater, Professor of Medicine, Georgetown University, whom you have heard before. Doctor Ernest Hall, Professor of Pathology at the University of California has selected two cases, and will take up the discussion of pathology after the cases have been presented from a clinical point of view by Doctor Yater. Now, as in that meeting in San Francisco, every one of you will have that same opportunity to agree or disagree with Doctor Yater's diagnosis, providing you do it in silence. I will turn the meeting over now to Doctor Yater, who will carry on from here. Doctor Yater.

\* \* \*

DOCTOR YATER: I imagine these two cases were selected on the assumption that I am a cardiologist instead of just a plain doctor. This conference will be a feat of mental gymnastics more than anything else, because I am ashamed I have to confess that I haven't been able to arrive at a diagnosis in either of these two cases; so that you are going to have a lot of fun at my expense. I have been trying to bribe Doctor Hall all morning, but he doesn't bite. I hope you have all read over these cases because then I believe you can sympathize with me. Anyhow, since I can't tell you what the diagnosis is, I am reminded of a story. An elderly man was very ill. He had lots

of consultants: ten wise men. And they went into a huddle in consultation. The patient knew that they wouldn't tell him the results of the consultation, so he had his small grandson hide in the closet in the room in which the consultation was to be held, and to listen to the consultation and to report back. After the consultation, the boy reported back and said that he couldn't understand what the doctors said, but that they stated at the end, "we will learn all about it at the autopsy." So that is the way it must be here.

In the first case, a white woman, aged 62, had apparently been pretty well most of her life until the year before she died. Now that means that we have certain things to consider from the standpoint of sex and with a patient who is in the older age group. So that limits our discussion to certain things immediately. At the time of the first examination, a year before death, she had a persistent attack of irregularity of the heart, and apparently this was auricular fibrillation. And, interestingly, an x-ray film of the heart showed no enlargement, nor did it reveal any passive congestion. So that we have auricular fibrillation in the patient without other evidence of heart disease. We know that auricular fibrillation may occur in patients without heart disease. But this patient died a year later. And, therefore we have to consider the possibility of heart disease in this case. The fibrillation came and went for several weeks, finally subsiding altogether, but without complete improvement in her general condition. I think I will go through the history and then come back and discuss the possibilities.

## REPORT OF CASE

CASE 1.—S-4656. H. S. White, female, aged 62.

*Past History*—In April, 1939, was under care of physician in Newark, Delaware, for irregularity of the heart. This was first persistent attack of this nature although patient thought she had had mild transient irregularity for many years previously. No history of rheumatic fever. Electrocardiogram taken at that time showed auricular fibrillation but 6 foot film showed no cardiac enlargement and no passive congestion or other parenchymal involvement. Fibrillation came and went for 7 weeks, finally subsiding altogether, but without complete improvement in general condition.

In June, 1939, patient returned to her home in Detroit and was hospitalized because of recurrence of fibrillation. In the hospital the following studies were made: *Fasting sugar* .105 grams; *non-protein-nitrogen* 34.5 mgs. *Basal metabolism*—13%. *Kahn negative*. *Blood count*: Hb. 108%; R.B.C. 5.40 m.; W.B.C. 16,600; differential normal. *Urinalysis*: negative.

*Electrocardiogram* on three occasions revealed evidence of frank coronary sclerosis with serious myocardial damage, and on two occasions uncontrolled fibrillation was evident.

For two months, numerous drugs were used in an attempt to control the rapid fibrillation. Early in August, 1939, while still fibrillating, fluid was found in the right chest, without temperature. On the x-ray film the fluid obscured the right leaf of the diaphragm and extended up the lateral chest wall to the level of the 7th rib in the axillary line.

*Note: Chest Film No. 1*—Report indicated shift of

\* This is the edited electric recorder transcript of the discussion of one of the cases of the clinical-pathological conference held at the second general meeting of the Section on General Medicine of the California Medical Association, May 5, 1942.

† Wallace M. Yater, M.D., is professor of medicine in the School of Medicine, Georgetown University, Washington, D. C. Doctor Yater was a guest speaker at the Seventy-first Annual Session of the California Medical Association, Del Monte, May 5-8, 1942.



the heart shadow toward the right side with consolidation of the right lung at the hilum. No cardiac or aortic enlargement. Left lung field clear.

At about this time all medication was stopped, since the fibrillation was persistent; and the family was notified that the outlook was extremely grave.

One week later, cardiac rate and rhythm spontaneously reverted to normal; and in the subsequent weeks the general condition also became normal, with increase in weight, strength and appetite and loss of nausea, which had been present while the patient was in the hospital. Her condition was considered sufficiently satisfactory by October 24, 1939, to permit a trip to California. Her only medication was one digitalis tablet daily, and mild sedative.

*Familial and Marital History*—Non-contributory.

*Present Illness*—Patient arrived in Los Angeles early in January, 1940. Was first seen January 18, because of transient fibrillation.

*Physical Examination*—Pulse, 80. Respirations, 16. Blood pressure, 160/90 (not fibrillating).

A well developed and nourished woman of stated age in no apparent distress. No cyanosis or edema. No distension of cervical veins. Lungs clear. No cardiac enlargement. Between attacks of fibrillation rhythm was entirely regular. A2 greater than P2. No murmurs. No enlargement of liver, spleen or glands. During attacks of fibrillation, only slight dyspnea. No orthopnea.

*Subsequent Course*—On 5 grains of quinidine sulfate, t.i.d., transient fibrillation was at first controlled satisfactorily; but after several days, transient episodes occurred despite increased doses of quinidine. Complete digitalization was tried with Digilanid C, because of nausea induced by smaller doses of Digitalis purpurea, persistent fibrillation having set in at this time. In spite of much more than the calculated dose, no change in the rapid fibrillation was obtained; and after several days Digilanid was dropped to 1 cat unit twice a day, as a maintenance dose. Evidence of a small amount of fluid was present in the right chest posteriorly, but there was no edema, hepatic enlargement or other evidence of decomposition. Fluid aspirated from right chest was clear and straw-colored and without cellular elements. Dry cough, severe in nature, developed at this time and continued until shortly before death, being only slightly affected by codeine.

Hydro-Quinidine was added to the maintenance dose of Digilanid, but without effect. Anorexia and weight loss became prominent features, with weakness.

There was a gradual downhill trend until the evening of April 1, 1940, when the patient became suddenly more dyspneic, and for the first time consented to hospitalization. There was marked cyanosis and orthopnea but no cough, and the rapid accumulation of chest fluid necessitated tapping twice within 48 hours, the fluid being as previously reported. Very rapid fibrillation (160-170 per minute) persisted, in spite of administration of Mecholyl and potassium acetate and intravenous strophanthin.

The patient lapsed into coma and died April 4.

**DOCTOR YATER:** A note is made that there was no history of rheumatic fever. Two or three months after the onset of the arrhythmis she returned home, but shortly after she was hospitalized because the fibrillation had recurred. The laboratory studies that are listed were all normal except for a moderate leukocytosis. Electrocardiograms on three occasions revealed evidence of frank coronary sclerosis with serious myocardial damage. That, unfortunately, is the way that the electrocardiologists give us poor in-

ternists the diagnosis of the electrocardiograms. Instead of telling us what they find, what the various waves show, and so forth and so on, and letting us decide whether it is evidence of myocardial sclerosis, they try to make it easy for us, but, as a matter of fact, they only make it harder. They assume we don't know anything about electrocardiograms, which, in many cases I suppose is correct. In this case no fibrillation was evident. Of course, a good cardiologist would naturally want to see those electrocardiograms, but not being a good one, it doesn't make much difference to me.

For two months numerous drugs were used in an attempt to control the rapid fibrillation. Rapid fibrillation is apparently emphasized. Early in August, 1939, about six months or more after she began to have her troubles, as far as she knew, while still fibrillating, there was evidence of fluid in the right chest, but without any fever connected with it. And you see it apparently wasn't great in amount. A note is made that the x-ray film showed that the heart shadow shifted to the right side with evidence of consolidation of the right lung at the hilum. There was still no evidence of cardiac or aortic enlargement, the left lung field being clear. Now, inasmuch as these signs in the chest cleared up later, it is hard to know exactly what they were due to. When I first read this case over on the train coming out here, I thought of the following possibilities: A myocardial infarct; atelectasis of the right lung, of the right lower lobe perhaps (not seeing the film, I couldn't be too sure of any of these things); and perhaps a tumor of the bronchus with atelectasis and possibly the accumulation of some fluid. But we can't be particularly dogmatic about these possibilities because we don't know enough about the details.

All medication was stopped, apparently, because the fibrillation did not respond to it, and the patient this time was very ill. We don't know what the features of this illness were, so we just have to visualize a very sick patient without any other details. But one week later, strangely enough, the cardiac rhythm spontaneously became normal. It may have been that her illness was due, or appeared to be due, more to the persistence of the rapid fibrillation than to, perhaps, some more serious condition at that time. She became quite normal with increase in weight, strength, and appetite, and lost the nausea which may have been due to the medication taken while she was in the hospital.

She became well enough to come to California, where everybody is supposed to get well. In this case, though, she didn't do that. She arrived in Los Angeles early in January, which was about eight months after she became ill, and on January 18 again had transient auricular fibrillation. The pulse rate was only 80. Respirations were normal. The blood pressure was 160/90. This is the first indication of the blood pressure reading that we have had, and the patient was not fibrillating at

this time. There was some increase in the systolic pressure with slight increase in the diastolic, but a great increase in pulse pressure. That in itself does not help us a great deal, because most people around 60 have a blood pressure about like that. At this time she was well nourished and not particularly ill. There was still no evidence of heart disease, no chronic passive congestion, and no cardiac enlargement. So we are still "up in the air."

She was given quinidine and digitalized without any apparent effect upon her condition. We don't need to go into the details of this feature, because sometimes we know that these drugs don't stop fibrillation. It persists in spite of everything. Then again, a small amount of fluid was present in the right chest posteriorly, with no edema. There was no evidence of congestive failure, or decompensation. Fluid aspirated from the right chest was clear and had no cellular elements. The patient had a dry cough, severe in nature, developing apparently about this time and continuing until shortly before death, that is, she had the cough from January to April, about three or four months.

Apparently, from the time she arrived in Los Angeles she lost her appetite and lost weight. Weakness became a prominent feature. Loss of appetite and weight and progressive weakness are not particularly important symptoms of heart disease, except in cases of hyperthyroidism and long standing cases of congestive failure. There was a gradual downhill trend until the evening of April 1, about a year after the patient first became ill, when she became suddenly more dyspneic and then went to the hospital. She had marked cyanosis and orthopnea, but no cough at that time; rapid accumulation of chest fluid taking place within forty-eight hours, and fibrillation, persisting in spite of medication.

Now let us discuss the case as a whole. We have some disadvantages in this discussion and some advantages. We can discuss the case from the standpoint of the whole picture, but at the same time we are at a disadvantage in not being able to examine the patient ourselves or getting more data. The outstanding thing here is the story of a woman with auricular fibrillation, but with no evidence, except on this one electrocardiogram, of heart failure, until perhaps the last few hours of her life.

What are the causes of auricular fibrillation? Under what conditions are we most apt to meet it? Of course, it is very common in rheumatic heart disease. But in this case there is no indication of any specific murmur or of rheumatic heart disease, and there is no enlargement of the heart; usually patients developing fibrillation as a result of rheumatic heart disease are the older ones, especially those with failure of compensation. Thus, it seems very unlikely that this woman could have had rheumatic heart disease.

Now then, hyperthyroidism. Both varieties are common causes of fibrillation, either paroxysmal

or persistent. This woman had rapid fibrillation, but apparently between the attacks she did not have an excessive heart rate. She apparently did not have the usual symptoms that go with hyperthyroidism. She hadn't lost weight until those last few months. The basal metabolic rate noted was the only one made, and one, of course, is not particularly reliable, but it was minus thirteen per cent and thus within the lower limits of normal. That isn't all we would need to make the diagnosis of her not having hyperthyroidism, but it certainly isn't in favor of it. And there were just not things that appealed to me as indicating that she had that condition.

We see auricular fibrillation in cases of hypertensive heart disease, but there is no evidence of heart disease here, and the heart isn't even enlarged. It wasn't failing, until late, and hypertension certainly was not stressed anywhere in the history.

Coronary artery disease, or coronary sclerosis, is not a common cause of auricular fibrillation except following frank coronary artery occlusion with myocardial infarction. There is nothing in this story to indicate a specific incident that would lead us to think of a myocardial infarction. It is possible that she had the coronary sclerosis. She was 62 and the electrocardiogram said that she had evidence of frank coronary sclerosis with serious myocardial damage. And it is quite possible that she did have coronary sclerosis of significant or important degree. The question is, however, whether that is the important thing, or the most important thing in the case. We must not be confused and jump to the conclusion that, because she had evidence of coronary sclerosis and because there is a possibility that she had it, that she did have it. But if we think that she did have coronary sclerosis it wouldn't be a bad bet, anyhow. She is 62, you know.

Another cause of fibrillation not commonly thought of is chronic constrictive pericarditis. I have had a number of these patients, and a certain percentage, in fact, a considerable percentage, have auricular fibrillation, usually persistent rather than paroxysmal. Now, did she have this condition? In this disease, you know, there is usually no enlargement of the heart. This patient didn't have enlargement of the heart. There is usually enlargement of the liver, which is not indicated in this case, and that doesn't help us. And there is no indication of a high venous pressure (the venous pressure was not given in the history), and she did not have ascites. I prefer to use the triad: Small, quiet heart; high venous pressure; and enlargement of the liver unexplained in other ways, because I have observed that ascites is very often absent in such cases. She didn't have an enlarged liver, and we don't know whether her heart was quiet, that is, whether it didn't expand much with each beat of the heart. We don't know about her venous pressure. Certainly there isn't very much in the history to give us the evidence of chronic constrictive pericarditis, although it can't absolutely

be ruled out.

And then another cause of auricular fibrillation is bacterial endocarditis, of which there was certainly very little evidence in this case. And it is interesting to comment at this time that patients with auricular fibrillation rarely, if ever, get bacterial endocarditis. But patients that develop bacterial endocarditis may develop auricular fibrillation. Thus, if they have had auricular fibrillation before they became ill, they probably do not have bacterial endocarditis.

Now lastly, tumor of the heart—and this is something that perhaps all of us didn't think about, will cause auricular fibrillation. And how will it cause auricular fibrillation? Metastatic lesions in the auricles cause auricular fibrillation. In the cases I have had, however, it has been a terminal condition, and persistent rather than paroxysmal. In this case the patient had auricular fibrillation for a year intermittently. But in the history, from January to April, the last few months before her death, she had symptoms that should go with a malignant tumor of the body—loss of weight, strength, and appetite. And she had fluid in the right chest that was hard to explain, since she did not have evidence of congestive heart failure.

So, therefore, to summarize, since there is no use in prolonging the agony, by exclusion I think—unless they have been holding out on us here some important information—we can rule out about everything except coronary sclerosis and tumor of the heart. I think we have considered about everything that could have existed. We have evidence here of both coronary sclerosis, if the electrocardiologist isn't misleading us, and a malignant neoplasm. It is rare to have metastases in the heart unless there is a more or less general carcinomatosis. Although this patient may have had coronary sclerosis, it is hard to see that all of her troubles were due to that. Probably she had coronary sclerosis and developed a malignant neoplasm that metastasized to the right auricle of the heart.

\* \* \*

DOCTOR HALL: Doctor Cheney, Doctor Yater, Members of the Association: I have a profound respect for these internists. They are well trained, like Doctor Yater, and I'm sure that he will do no blushing. When he told me that he didn't know what this was, I didn't believe him, and I find that I am right.

This first slide isn't too good, but it is the best we have and we're probably lucky to have it. These are the heart and the lungs, and in the mediastinum one of the tracheobronchial lymph nodes. There is a greyish-white tumor which is bent into the main bronchus of the right lower lobe. The bronchus was considerably narrowed, but the mucous membrane was not involved. The orifice of the right pulmonary veins entering the left auricle and one of these veins were practically occluded. The wall of the auricle is infiltrated with this grey tumor which extends practically

to the mitral valve. The mitral valve is a bit thickened, apparently by an old, healed rheumatic lesion, probably not of much moment. There was rather marked coronary sclerosis in this case, but no infarction of the heart, and the aorta showed rather marked sclerosis as well. There was some pericarditis at the base of the heart over the left auricle, the tumor had penetrated the pericardium and produced a moderate pericarditis of that portion of the heart. The pulmonary artery was free. The heart was only slightly enlarged, and the valve orifices were of normal circumference. There was a large plaque at the ostium of the right coronary artery, which narrowed the ostium somewhat, and there was some thickening of the endocardium of the left ventricle. The wall of the left ventricle measured thirteen millimeters, the right seven millimeters. The liver weighed 1150 grams and showed no marked change and only a moderate degree of passive congestion. The gallbladder contained many brown, faceted gallstones from one millimeter to two centimeters in diameter. The other organs were essentially normal.

In this second slide we have a section through the wall of the left auricle. In the midportion, the pink fibers are the heart fibers, and the dark cells are those of the tumor. This tumor is apparently a lymphosarcoma, of the small-cell variety, and is not a carcinoma of a bronchus. The tumor probably originated in the tracheobronchial lymph node.

This third slide shows a section of the interauricular septum showing the same thing. There are muscle fibers scattered throughout this area of very heavy infiltration with small dark cells.

This last slide is the high-power section from the tracheobronchial lymph node; it shows a very heavy stroma of fibrous tissue and the small dark cells that look very much like lymphocytes.

To summarize, then, although there was moderate congestive heart failure, the most important cardiac lesion was infiltration of the left auricle and the septum of the auricles by a lymphosarcoma, apparently a rather slowly growing tumor. The primary source was apparently in the tracheobronchial lymph nodes. In addition, there was generalized arteriosclerosis and rather severe local arteriosclerosis of the coronary arteries, a small embolus in the spleen, more or less perisplenitis, and gallstones.

Georgetown University Hospital.

---

*From an Article on "Medical Inspection of Prisoners at San Quentin, With Report of Case of Tinea Versicolor," by L. L. Stanley, M.D., San Quentin.—Each prisoner upon entering San Quentin prison is subjected to a thorough physical examination. As soon as he enters, he is taken to the turnkey's office, properly registered, and instructed as to his privileges and requirements. After a bath, a shave, and a cropping of the hair he is taken to the Bertillon room, where his physical measurements are tabulated, as well as any scars, deformities, birthmarks and the imprints of the palmar surfaces of his thumbs and fingers. His face is photographed both from in front and laterally for records of identification. . . .*

## PRIMARY PAPILLARY CARCINOMA OF THE URETER\*

WITH REPORT OF A CASE

A. J. SCHOLL, M. D.

AND

V. J. GALLAGHER, M. D.

Los Angeles

**U**RETERAL tumors, until the last decade, were considered to occur only rarely. Reports appearing since the more general acceptance and use of newer urographic procedures indicate that not only are we now discovering tumors that would previously have been overlooked, but we are finding them at an earlier, more curable stage.

Ureteral tumors, similar to tumors of the renal pelvis, are most commonly papillary in type, though cases of squamous cell and, more rarely, benign tumors have been reported. Usually occurring in the lower third of the ureter, these papillary growths are of a high degree of malignancy. They grow rapidly and have a marked tendency to recur after removal.

Due to delay in treatment, or as the result of an incomplete operation, the immediate and late mortality have been high in the reported cases. Early diagnosis, and a more thorough removal of the tumor and regional structure, should give us the same satisfactory postoperative results which are now obtained in the treatment of papillary tumors of the bladder, a group not dissimilar in type and degree of malignancy.

The following case report is of interest mainly because it illustrates the accuracy of diagnosis obtainable by present cystoscopic and urographic procedures. It also affords an opportunity to discuss nephro-ureterectomy, a procedure especially suitable not only for malignant conditions of the ureter but also for other conditions causing ureteral obstruction and infection.

### REPORT OF CASE

*Ureteral tumor, causing ureteral obstruction and renal damage. Complete nephroureterectomy, fulguration of intramural portion of the ureter, followed by postoperative x-ray therapy.*

CASE 1.—C. B., a male, aged 35, was seen shortly after a two-day attack of hematuria. He had similar attacks three months and six months earlier. Six months ago he had a short period of low back pain which made it difficult for him to stand erect. More recently he has had pain in his right loin which occasionally radiates to the scrotum.

The urine contained red blood cells, leukocytes, and a trace of albumin. An examination of the blood revealed nothing abnormal. The Wassermann examination was negative. A nonprotein nitrogen determination was 30, and the two-hour phenolsulphonphthalein return was 90 per cent.

No masses or tenderness were found on physical examination. The prostate was normal on palpation, and the expressed prostatic secretion contained only a few cells. There was a moderate-sized scar of an appendectomy incision in the lower right quadrant of the abdomen.

\* Read before the Section on Urology, at the Seventy-first Annual Session of the California Medical Association, Del Monte, May 3-6, 1942.

The x-ray of the kidneys, ureters, and bladder revealed nothing unusual.

Cystoscopy showed a normal urethra and bladder, except for moderate inflammation around the right ureteral orifice. The urine from both ureters was clear. Intravenously-injected indigo-carmin returned from both ureters in four minutes, the left normal in amount, the right markedly diminished. A left ureteral catheter was passed up the left ureter without difficulty. The catheter on the right side met an obstruction about 8 cm. above the orifice.

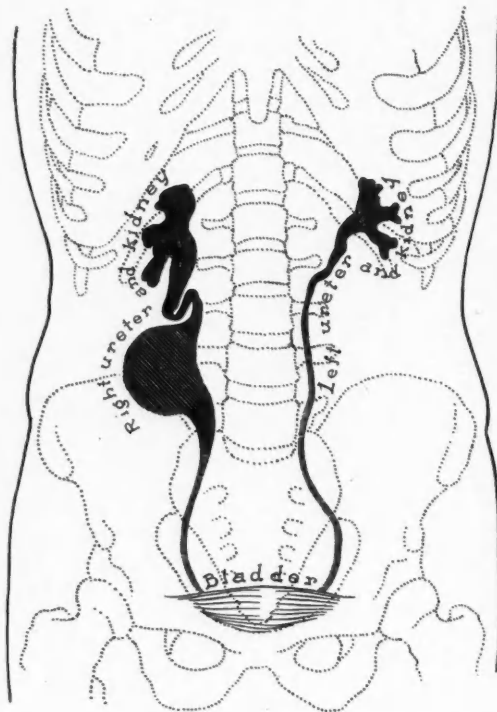


Fig. 1.—Dilatation and filling defect in middle-third of ureter.

The pyelograms showed a normal left pelvis and ureter. On the right side the catheter only reached the level of the crest of the ilium where it turned lateralwards. At the point of turning, the injected opaque medium disclosed a marked dilatation of the ureter with a large filling defect above it. (Fig. 1.) Repeated injection failed to force the opaque fluid above this area. Films taken five, fifteen, and twenty-five minutes after intravenous injection of diodrast showed the dye in good concentration in the pelves and calices of both kidneys. No abnormality was noted on the left side. There was marked enlargement of the calices of the right kidney, and slight enlargement of the kidney pelvis and upper third of the ureter. The upper portion of the right ureter was tortuous. About the middle of the ureter, there was considerable dilatation with a large filling defect measuring over 5 cm. in diameter. The left ureter was normal in course and diameter. Films taken with the patient in an upright position showed that the region of the filling defect in the right ureter was freely movable. Excursion of both ureters was within normal limits. A film taken one hour after injection of diodrast showed that there was fair drainage of the right kidney. The bladder was moderately



distended and normal in outline.

A diagnosis of ureteral tumor was made, and a right nephroureterectomy planned.

**Operation.** Spinal anesthesia. The patient was placed on his left side and the kidney explored through a right postero-lateral incision. The lower angle of the incision was placed as closely as possible to the crest of the ilium so as to give the best possible access to the lower portions of the ureter. The kidney, which was a little larger than normal but of good consistency, was readily delivered into the wound. The ureter was freed from adhesions, and on tracing it downward, a fusiform swelling about 2 x 8 cm. in size was found in the middle third. This mass was soft, freely movable, and not adherent. The renal pedicle was then clamped, cut, and tied, and the kidney still attached to the ureter was brought out through the anterior angle of the incision. The ureter was then freed down as far as possible, several Penrose drains inserted, and the kidney incision closed. Several sutures were inserted and left untied in the anterior angle of the wound, to be tied after removal of the ureter. The patient was then turned on his back, and a second incision was made paralleling the right border of the rectus muscle. The rectus muscle was pulled toward the midline, and the peritoneum was separated from the lateral wall and retracted medianwards. Adhesions from the old appendectomy incision prevented any extensive exposure, leaving only a small area below the scar which could be explored without tearing the peritoneum. Traction on the upper ureter aided in identifying the lower segment, which was then freed of its adhesions down to the bladder wall and upward to that portion reached from the postero-lateral incision. The bladder wall was grasped with forceps, the ureter cut, fulgurated, and the upper end tied. A fulgurating electrode was then inserted through the intramural portion of the ureter into the bladder, and the intervening segment of mucosa and muscularis thoroughly charred. The bladder was then closed with plain catgut sutures. The wound was drained and closed in the usual manner. (Fig. 2.)

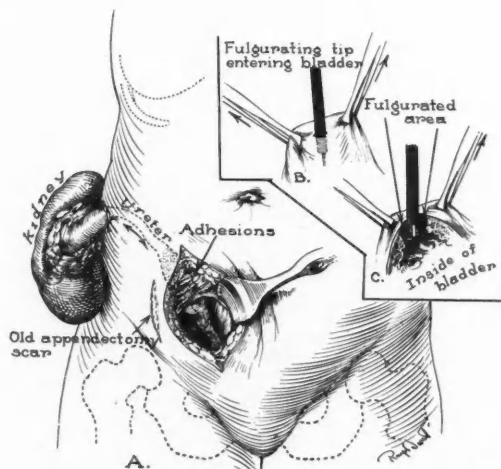


Fig. 2.—A. Kidney removed through flank incision before cutting lower ureter. Ureter then withdrawn through incision in flank.

B. Intramural segment of ureter charred with fulgurating electrode.

The patient had no trouble following operation. Several weeks later a course of therapeutic x-ray was given over the lower right ureteral area. Eight months later the patient had gained fifteen pounds; there were no signs

or symptoms suggestive of recurrence; and cystoscopy revealed nothing abnormal.

#### COMMENT

The above case is of interest in that the age of the patient (35) is much lower than the average (58 years) of patients with ureteral tumors.

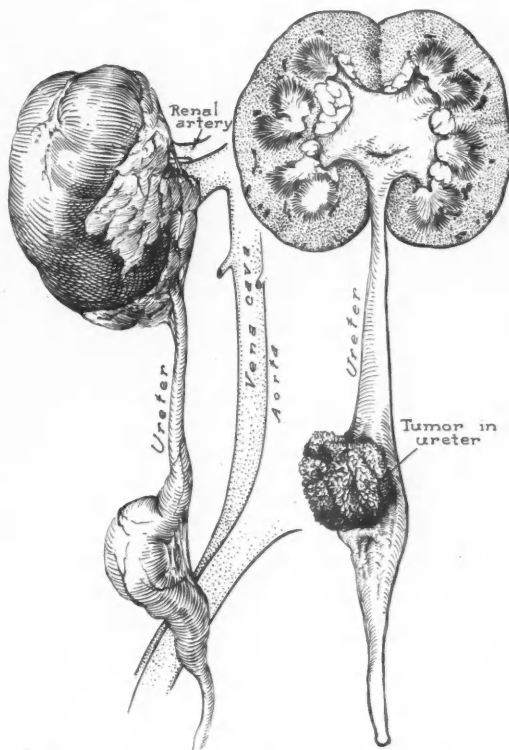


Fig. 3.—Kidney and ureter showing papillomatous mass in midsection of ureter.

The growth, which was of a low degree of malignancy, was apparently confined to the ureter; there were no periureteral adhesions and only little invasion of the ureteral wall. There was a long segment of normal ureter below the tumor, and the bladder showed no evidence of transplants (Fig. 3). Complete removal of the kidney and ureter with its overlying tissues, together with thorough fulguration of the intramural segment of the bladder, should make the prognosis not unfavorable.

#### DIAGNOSIS

Before the introduction of more accurate methods of urologic diagnosis, undoubtedly many cases of ureteral tumor were overlooked.

The most common symptom is hematuria; mild and intermittent in the early stages, it later becomes more profuse and at times continuous. The blood is usually mixed with the urine, and may be spontaneous or follow exertion. The

urine, even between attacks of hematuria, contains some red blood cells and leukocytes. Occasionally clots are formed, which may be long and thin, representing a cast of the ureter. Intermittent pain in the renal area is at times associated with the passage of clots.

In some cases ureteral obstruction does not develop, or else it is so slow and gradual that it does not cause pain. Usually there is some pain resulting from obstruction of the ureter by the tumor. Occasionally obstruction may cause a large or hydronephrotic kidney which can be seen or felt on examination.

During the last decade many cases of ureteral tumor have been diagnosed earlier, at a more favorable stage for operation. This, together with the proper treatment, should give much better postoperative results than were formerly obtained. In only 14 of 49 cases collected by Rous-selot and Lamon<sup>1</sup> in 1930 was an accurate pre-operative diagnosis made. More exact cystoscopic and urographic procedures have been of great value in diagnosing these tumors.

The bladder may be normal on cystoscopic examination, or there may be a bulging of the corresponding ureteral orifice or an area of redness about the opening. A small papillomatous mass is sometimes seen projecting from the ureteral orifice, or it may come into view, or the ureteral area may bulge down only with ureteral peristalsis. Tumor tissue projecting from the ureter, surrounding the orifice or producing multiple transplants to the bladder wall, does not occur as readily or as freely with primary ureteral tumor as it does with the papillomatous ureteral tumors which are secondary to renal pelvic tumors.

Blood may be seen coming from the orifice; it is usually merely a trickle, easily washed away with the irrigating fluid. Ureteral obstruction or distention of the ureteral wall inhibits ureteral peristalsis and prevents the usual spurts of urine, whether blood-tinged or clear. On attempting to pass a ureteral catheter, an impassable obstruction may be encountered, usually in the lower third of the ureter. This is not necessarily due to complete ureteral obstruction as much as to difficulty in passing around or through the folds of tumor tissue. Catheter manipulations may cause bleeding, which passes through the catheter or is seen exuding through the orifice about the catheter. It has also been found that, while blood-stained urine is collected when the catheter is below the tumor, urine free of blood may be obtained when the catheter is forced beyond the tumor.

Urography, both retrograde and excretory, is of great value and has established the diagnosis in a definite number of cases that might have been overlooked entirely or discovered only after a preliminary kidney exploration. If the ureteral catheter can be passed by the obstruction, a nephroureterogram may show a filling defect indicating the location and size of the tumor. Rusche and Bacon<sup>2</sup> were able to outline the tumor in one of their cases by gradually withdrawing the ure-

teral catheter and taking repeated urograms. If the ureteral obstruction is impassable, an injection of the lower segment of the ureter may outline the lower border of the ureter and show the extent of the ureteral dilatation, and also some of the contrast fluid may extravasate through the tumor. Excretory urography may be unsatisfactory in cases of long-standing ureteral obstruction and consequent loss of renal function. In cases such as the one reported above, where the obstruction is incomplete or of short duration, an excellent delineation of not only the upper but the lower ureter as well may be obtained.

The ureter below the site of the tumor is usually normal, and that portion above the tumor dilated, especially in cases of moderate obstruction.

#### TREATMENT

A number of different surgical procedures have been suggested in the treatment of tumors of the ureter—cauterization, fulguration, partial resection of the ureter, reimplantation of the ureter into the bladder, and other measures. Papillary tumors of the ureter, some of which may appear to be histologically benign, are nearly all clinically malignant. Similar to papillary tumors of the renal pelvis and bladder, recurrence, extension and transplantation of the growth are more frequently found than not. Consequently conservative measures are insufficient, and an effort should be made to remove the entire ureter and to destroy as much of the bladder wall as necessary. The best results have been obtained with complete nephroureterectomy, combined with some method of disposal of the ureteral area in the bladder such as advised by Colston<sup>3</sup> and Stang and Hertzog.<sup>4</sup> Cook and Counseller<sup>5</sup> advise resection of the ureteral segment, including all the layers of the bladder wall and the overlying tissue, in order to eliminate the possibility of lymphatic extension from the tumor to the bladder wall.

Nephroureterectomy is an operation which, until the last decade, has been performed only rarely for tumors involving the ureter. Kelly,<sup>6</sup> in 1896, was one of the first to advocate this procedure. He removed the kidney and ureter through a single long incision. Later Lilienthal<sup>7</sup> called attention to a simpler, less-mutilating approach in which the kidney was removed through the usual posterior incision, the ureter being left projecting from the incision. The lower ureter was freed, ligated, and cut through a low inguinal incision, being then pulled through the posterior incision. Beer,<sup>8</sup> in 1921, reported a case of ureteral tumor in which he removed the entire kidney and ureter intact through the posterior incision. The ureter was cut off at the bladder through a low rectus incision. All precautions were taken not to contaminate the large retroperitoneal wound.

Nephroureterectomy, while also of value in other conditions, is definitely indicated in cases of tumor of the ureter, whether the growth is

primarily a ureteral one or whether it is secondary to a tumor of the renal pelvis. Hunt,<sup>9</sup> in a review of cases of tumor of the renal pelvis, stated that 9 of 15 cases of papillary epithelioma of the renal pelvis had recurrence or extension of the growth to the ureter following simple nephrectomy.

There is very little difference in the difficulty of removing the kidney and ureter as a single unit, whether the lower ureter is freed from its attachments before the nephrectomy or after. In cases where nephroureterectomy is indicated for conditions other than tumor, the kidney should be explored first, as not infrequently it is possible to reach a sufficient segment of the ureter from the posterior wound.

In Beer's<sup>8</sup> original description of his aseptic ureteronephrectomy for ureteral tumor, the kidney was delivered before exploring the lower ureter. In cases where the diagnosis was definitely established, Judd<sup>10</sup> usually freed the kidney first; he stated that traction on the upper ureter aided in locating the lower ureteral segment. In cases where an extension of the tumor to the bladder wall required a partial resection of the bladder, Hunt<sup>9</sup> first removed a segment of the bladder with the attached ureter before doing a nephrectomy, at which time the entire mass, kidney, ureter, and bladder segment were all removed in one piece. Gutierrez<sup>11</sup> advocates the introduction of a ureteral catheter before surgical exploration to aid in locating the ureter.

In the case reported above, nephrectomy was definitely necessary; the ureterogram indicated that the ureter was movable and unattached, and cystoscopy had shown that no time-consuming resection of the bladder would need to be done. The presence of an old, muscle-splitting, appendectomy incision, and its attendant peritoneal adhesions, would limit any extensive upward exposure of the ureter through the lower incision. Therefore, nephrectomy was done first through a lumbar incision, and the ureter separated from its attachments from above downward, and an effort made to free the ureter as low down as possible. This extensive dissection from above downward simplified the second step in the operation, for the exposure obtained through the right rectus incision, as anticipated, was definitely limited by the peritoneal adhesions around the appendectomy scar.

#### PROGNOSIS AND MORTALITY

The numerous recent reports of cases of ureteral tumor may stimulate our interest and aid us in the recognition of these cases while they are still in a curable stage. Stang and Hertzog<sup>4</sup> report that more than one-half of the total number of cases in the literature have been recorded in the last eight years. Most published reports indicate rapid recurrence of the tumor, a high operative mortality, and in most cases a quickly fatal outcome.

There are several factors besides late recognition of the tumor which contribute to the high

mortality. The tumors usually occur in elderly people; the average age in several series of reported cases was 58 years. The location of the growth causes urinary obstruction and renal damage, and surgical removal necessitates an extensive incision, exposing wide areas to tumor invasion and infection.

A chronologic review of the literature shows an increasing number of cases being found. Rousselot and Lamon,<sup>1</sup> in 1930, found that 30 of a group of 49 collected cases died under treatment or shortly afterwards.

Scott,<sup>12</sup> in 1934, discarded some of Rousselot and Lamon's<sup>1</sup> cases, added 2 of his own, and discussed the results of a group of 61 cases. Seventeen patients were treated palliatively; 45 were operated upon with a mortality of 27 per cent. In 18 of the remaining cases, death occurred shortly afterwards, in 13 from the results of the tumor, in 5 from unknown causes. Of those patients on whom late postoperative data were obtainable, 50 per cent died within twelve months. Only 2 of the entire group were known to be living and well five years after operation.

Rusche and Bacon<sup>2</sup> reviewed the literature in the period since the publication of Scott's paper<sup>12</sup> until 1936; they found 26 cases and added 1 of their own. In 14 cases nephroureterectomy was done for ureteral tumor; in 1 of these no postoperative data was obtainable. In 8 of the remaining 13 cases, death occurred directly or shortly after operation. Only 1 of 6 patients on whom two separate operations were done was alive. One patient died following a primary kidney operation. Four had no surgery for various reasons; all died. Two cases were found at autopsy. In all, only 6 of the 27 collected cases were alive.

In 1939, Foord and Ferrier<sup>13</sup> were able to collect 139 cases, including those of Scott<sup>12</sup> and Rusche and Bacon.<sup>2</sup> In 100 surgical cases, 34 per cent died following operation or shortly afterwards. The immediate operative mortality in 44 one-stage nephroureterectomies was 40 per cent.

Many ureteral tumors are of a high degree of malignancy which has a definite bearing on the prognosis. Cook and Counseller,<sup>5</sup> in a discussion of the degree of malignancy in these cases, noted that 7 of 10 patients with ureteral tumors and a malignancy grading of I or II (Broder's classification), were alive for from 1 to 9 years after operation. In contrast to this, 5 of 7 patients with a malignancy grade of III or IV were dead; 1 was alive 8 years after operation and 1 was not traced.

Many reported cases were seen late in the course of the disease. Simple nephrectomy was performed in a number of cases, persistent pain and hematuria finally directing attention to the ureter. In view of our present knowledge of these tumors, it is possible that many cases did not receive early or adequate treatment. Better results should be obtained in future cases. More general use of intravenous urography may permit recognition of the growth in a larger number of cases

while the tumor is still in an operable stage, and there is also a better understanding of the need for thorough removal of all potential tumor-bearing tissue.

#### SUMMARY

The reported results of cases of tumor of the ureter all indicate a high mortality following surgical treatment. Delayed, inadequate treatment, urinary obstruction, and infection, together with a high degree of malignancy, all contribute to increase the operative risk.

A case is reported of a male, aged 35, with a papillary tumor of the ureter. The kidney and ureter were removed and the bladder segment containing the mural portion of the ureter thoroughly fulgurated. This case is of interest on account of the early age of the patient, the positive clarity of the intravenous pyelograms, and the ease of surgical removal of the potential tumor-bearing tissues.

1930 Wilshire Boulevard.

#### REFERENCES

1. Rousselot, L. M., and Lamon, J. D.: Primary Carcinoma of the Ureter: Report of a Case and a Review of the Literature, *Surg., Gynec. and Obst.*, 50:17-28 (Jan.), 1930.
2. Rusche, Carl F., and Bacon, Samuel K.: Primary Ureteral Neoplasms: Report of Two Cases and Review of the Literature, *J. Urol.*, 39:319-340 (March), 1938.
3. Colston, J. A. C.: Primary Tumors of the Ureter: With Presentation of a New Method of Complete Nephroureterectomy, *Tr. Am. Ass'n Genito-Urin. Surg.*, 26:41-66, 1933.
4. Stang, H. M., and Hertzog, J.: Primary Carcinoma of the Ureter: A Report of Four Cases, *J. Urol.*, 45:519-526 (April), 1941.
5. Cook, Edward N., and Counseller, Virgil S.: Primary Epithelioma of the Ureter, *J.A.M.A.*, 116:122-127 (Jan. 11), 1941.
6. Kelly, H. A.: Nephroureterectomy, *Johns Hopkins Hosp. Bul.*, 7:31-37 (Feb. and March), 1896.
7. Lilienthal, Howard: Nephroureterectomy, *Ann. Surg.*, 53:521, 1911.
8. Beer, Edwin: Aseptic Nephroureterectomy: Technique and Indications, *J.A.M.A.*, 77:1176-1177 (Oct. 8), 1921.
9. Hunt, Verne C.: Papillary Epithelioma of the Renal Pelvis, *J. Urol.*, 18:225-246 (Sept.), 1927.
10. Judd, E. S.: Personal observation.
11. Gutierrez, Robert: Indications and Technique of Combined Ureteronephrectomy, *Ann. Surg.*, XCIII:511-543 (Feb.), 1931.
12. Scott, W. W.: Primary Carcinoma of the Ureter, *Surg., Gynec. and Obst.*, 58:215-227 (Feb.), 1934.
13. Foord, Alvin G., and Ferrier, Paul A.: Primary Carcinoma of the Ureter: With Report of Seven Cases, *J.A.M.A.*, 112:596-601 (Feb. 18), 1939.

"We know that sometimes a price must be paid for civilization and peace; and when madness and passion and the desertion of all the standards of decency and good faith bring a great agony to the world, it is sometimes the manifest duty and the high privilege of a free people, by the power of sacrifice and courage, to transmute that agony into a new salvation. In this war, we have no illusions about the strength of the enemy or the length of the war. We know that wars can not be won by abstract nouns and that tyrants can not be hanged by a string of adjectives. We have freely made our choice and we propose to abide by the issue with all free men until the end."

## THYROID DISEASE\*

### EXPERIENCES AND CONCLUSIONS OF A THYROID COMMITTEE†

H. H. SEARLS, M. D.

San Francisco

IN the University of California Hospital, during the past three decades, 4722 operations for goiter have been performed by various members of the surgical visiting and resident staffs.

The mortality rate (1.4 per cent for the whole series) has varied from year to year, with a fortunate downward tendency best illustrated graphically. (Fig. 1.) In the past 17 years, the main bulk of our series (4062 partial thyroidectomies) has been developed. During this time 40 deaths occurred (0.98 per cent). Since the organization of the thyroid committee 11 years ago, there have been 21 deaths in 2531 partial thyroidectomies (0.83 per cent). The operations were performed by approximately 20 surgeons, 15 of whom were resident surgeons at the time of their contributions to the series. Follow-up studies were insufficient and casual at first, but during the past 5 years, these studies have been maintained at 100 per cent. To date none of the 410 service patients operated on for goiter during the past 5 years has had a recurrence of the disease. Of these patients, 11.6 per cent developed hypothyroidism, and an additional 7.5 per cent had myxedema. As encountered in the follow-up, patients with these sequelae have been relieved by the oral administration of thyroid substance. With these exceptions, universally good results have been obtained during this period.

From 1912 to 1920 the pioneering study of the diagnosis and treatment of goiter by Drs. H. C. Moffitt and W. I. Terry established a firm basis for the whole series. In the following decade the constantly-increasing size of the series stimulated the interest of younger members of the staff until, in 1930, a committee‡ was formed, to meet each week for the study of new patients with thyroid disease, and the review of old cases. For the past 11 years, this committee, composed of internists, roentgenologists, pathologists and surgeons, has observed these patients and discussed their diagnosis and treatment. At first the various members held numerous, diametrically opposed, rather fixed ideas on many of the points under discussion. Gradually, by convincing argument and demonstration, most of these divergent opinions have become harmonized. Now, agreement as to diagnosis is universally attained, and at least a recognition of the value of the various methods

\* Read before the Third General Meeting of the Seventieth Annual Session of the California Medical Association, Del Monte, May 6-8, 1941.

† From the Department of Surgery, University of California Medical School.

‡ Thyroid Committee, University of California Medical School: Theodore L. Althausen, Evelyn Anderson, Edwin I. Bartlett, H. Glenn Bell, Charles L. Connor, Leon Goldman, Carl L. Hoag, William J. Kerr, Hans Lissner, William A. Rellly, James F. Rinehart, J. Maurice Robinson, Henry H. Searls, H. Clare Shepardson, Mayo H. Soley, Robert S. Stone, Wallace I. Terry, Robertson Ward.



of treatment is admitted by all.

It is my privilege to present to you some of the ideas, impressions and conclusions which have developed in the minds of the committee as this mass of material has passed in review. Out of friendly discussion and, occasionally, heated debate, have come conceptions which have improved our understanding of the many ramifications of the problem.

tients a fair estimate of the regions of Northern California in which the inhabitants are more likely to develop goiter has been charted.

Out of studies in the differential diagnosis between the hyperthyroid state and other conditions closely simulating it, have come clearer pictures of the menopausal syndrome and of anxiety states exhibiting hyperventilation. In the patient at menopause, who has an enlarged thyroid, the

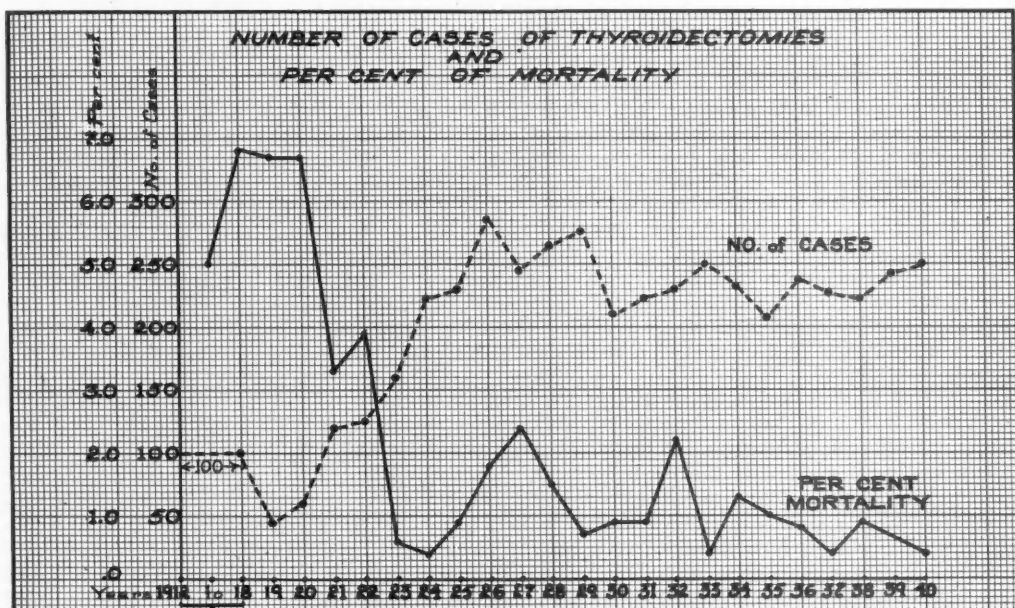


Chart 1.—Number of cases of thyroidectomies and per cent of mortality.

In the earlier years of our meetings, perhaps the greatest point of disagreement was centered about the clinical picture of adenoma with hyperthyroidism, and its possible relationship to exophthalmic goiter. The younger internists, siding with the pathologists, insisted that, usually, the two conditions were but different manifestations of the same disease. The older internists, together with the surgeons, considered them as separate clinical entities. Through the forces of argument, demonstration and an increasingly supportive literature, the surgeons have come to recognize the probable truth of the contention of the younger internists. Basic differences in the treatment of the two conditions, however, are recognized by most of us. Thus, as in many other instances, discussion has developed a convergence of opposing beliefs.

The patients and their records, in such a large series, have presented to the members of the committee many leads for special investigation. The results of some of these studies follow.

#### SPECIAL INVESTIGATIONS

From the history of residence of over 400 pa-

question often arises concerning the presence or absence of hyperthyroidism. In the differentiation, the usual features of hyperthyroidism, such as tachycardia, loss of weight, increased appetite, exophthalmos, increased vascularity of the gland and high basal metabolic rate, are of value in confirming the diagnosis of toxic goiter. Other symptoms and signs, such as nervousness, tremor, emotionalism, irritability, intolerance to heat and hyperidrosis may be of menopausal origin and therefore misleading. Heat intolerance and hyperidrosis, however, are not constant in a given patient at the menopause, but may alternate with a sense of cold, whereas they are constant in the patient with hyperthyroidism. A therapeutic dose of an estrogenic substance, such as estrodial dipropionate ( $2\frac{1}{2}$  mg intramuscularly), should prove to be differential, as it will relieve menopausal symptoms in a few days, but will have no effect on the patient with true hyperthyroidism.

The faster way of living, economic upheaval, war news and other disturbing elements have all contributed to an increase in the number of those persons classified by the psychiatrist as exhibiting an anxiety state. One of the manifestations of

an anxiety neurosis is the hyperventilation syndrome. The nervousness, emotionalism, tremor and tachycardia associated with this peculiar habit of overbreathing may simulate hyperthyroidism. Now, only in very rare instances can nontoxic, diffuse goiter be considered surgical. Yet frequently such a goiter has been removed in error because a coincident hyperventilation syndrome was mistaken for hyperthyroidism. The failure to gain relief thereafter is disappointing to surgeon, patient and relatives. In borderline cases the hyperventilation syndrome should be ruled out by investigation of the psychic state, by observation of the breathing habits (often best shown on the graph at the time of a test of basal metabolism), by attempted reproduction of the symptoms through forced overbreathing, and by therapeutic test with ammonium chloride or carbon dioxide.

#### THYROIDITIS

The committee has followed, with great interest, the patients who have come to us with the various types of inflammation of the thyroid gland. Acute thyroiditis has been encountered only rarely. Usually it was nonsuppurative and responded to medical measures. In several instances suppuration supervened, requiring incision and drainage, followed in each case by a return to normal health, without impairment of thyroid function. A rare but interesting *wandering* type of acute thyroiditis has been seen in the series. In association with fever and malaise, a tender indurated area develops in one lobe of the thyroid and, healing as it goes, slowly proceeds to other parts of the gland. A sense of pressure on the trachea is a miserable symptom. It is our belief that surgical treatment is not indicated and that the condition will resolve completely with rest, local heat or cold, and measures to combat the toxemia. Progress is slow and six weeks may pass before relief is obtained. Consequent hypofunction has not been observed.

Chronic thyroiditis has occurred more frequently. In this disease a moderate fibrosis and lymphocytic infiltration are common findings in the microscopic picture. Rarely, the inflammatory process may progress to a complete or nearly complete replacement of the glandular tissue by an overwhelming fibrosis. First described by Riedel, the picture is that of an iron-hard goiter causing extreme constrictive pressure on the trachea. Hypothyroidism develops after either resection of the isthmus, or the more rational procedure of subtotal thyroidectomy. We have met this condition in only five instances in our series. Hashimoto's struma, a type of chronic thyroiditis in which lymphoid elements replace the glandular structure, has been seen in 10 instances. Pressure on the trachea drives the patient to seek relief. Differentiation from the Riedel type is difficult except microscopically. In most of these, subtotal thyroidectomy has been our treatment. Marked hypofunction, approaching myxedema, has fol-

lowed whether or not any surgical treatment was instituted.

#### MALIGNANT GOITER

The committee has had an excellent opportunity to study malignant goiter. One hundred and twenty-one cases of malignancy have been observed. From the study of the case records of this group a strong conviction has developed that, in a very high proportion of cases, cancer of the thyroid is a malignant degeneration of a preëxisting benign nodular goiter. In the whole series the ratio of thyroid malignancy to nodular goiter was as 1 to 34 in women, and 1 to 17 in men. When questioned, the patient with malignant goiter often relates having had an asymmetric goiter for years, with recent sudden enlargement. Such a story is so commonly encountered that the committee is convinced that nodular goiter should be considered as a precancerous lesion. This threat of a possible malignant change in a nodular goiter is, in our eyes, the prime indication for its surgical removal; any change in the consistency or in the rate of growth of a nodular goiter renders its removal imperative. The preoperative determination of malignancy in a nodular goiter can be established only after it has progressed beyond surgical cure. If gross or microscopic examination of the specimen shows cancer, radical surgery should be followed by a full course of roentgen therapy. The prognosis in malignant goiter varies with the microscopic pattern. Papillary adenocarcinomata may be held dormant for years, or even cured by radical surgery and the judicious use of x-ray treatment. On the contrary, some of the patients with malignant adenoma of fetal pattern, and those with the so-called malignant adenoma of Langhans have obtained little or no benefit from surgery or x-ray, and have suffered early recurrence which quickly terminated in death. Evidence of round cell or polymorphonuclear infiltration among the cancer cells is of grave prognostic significance. Usually, the younger patients have a better prognosis.

As in other clinics an increasing interest in "lateral aberrant" thyroid tissue has developed here. Its precancerous character renders its recognition most important. Usually of a papillary cystadenomatous type, it is found along the jugular veins and in the upper mediastinum. If aberrant thyroid tissue is encountered, all such regions should be explored and, if any further nodules are discovered, they should be removed in their entirety.

#### LABORATORY PROCEDURES

Among laboratory procedures, the test for basal metabolic rate remains the best index of thyroid function. Various factors besides the degree of thyroid activity influence the basal metabolic rate, and may render it misleading. The patient may have an abnormally low level of basal metabolism in good health. In such a patient, although she becomes evidently toxic, the development of hyperthyroidism may fail to bring the rate up-

ward as far as zero. Such masked hyperthyroidism has been encountered often in this series, especially in the patient with toxic nodular goiter.

Determinations of blood cholesterol are of value in checking against the basal metabolic rate. In the presence of a normally functioning liver, the blood cholesterol is low in hyperthyroidism and high in hypothyroid states and in myxedema. In general, blood cholesterol readings are in inverse ratio to the basal metabolic rate.

In hyperthyroidism galactose tolerance is about three times normal, but is abnormally low in hypothyroid states.

#### TREATMENT

The committee is in fair harmony concerning the *treatment* of diseases of the thyroid gland. It agrees that iodine should be used as a prophylactic public health measure, especially in regions known to favor the development of goiter.

*Simple or adolescent goiter* should be treated under close observation by the oral administration of thyroid substance in a dosage sufficient to produce slight hyperthyroidism. From three to four grains daily usually will reduce the size of the gland. Except as a prophylactic, iodine is of no therapeutic value.

*Nodular goiter* is considered surgical whether or not toxicity has developed. Removal of all the nodular part should be accomplished; if possible, a moderate amount of grossly normal tissue should be preserved. We have considered its treatment by x-ray as irrational.

*Toxic diffuse goiter* (exophthalmic goiter) has been treated by subtotal resection in the large majority of instances, and such therapy remains our choice of procedure. A selected series (70 cases) has been successfully relieved by adequate roentgen therapy. For this type of treatment we have chosen only moderately toxic patients, without complications, who were not breadwinners and therefore were able to spend more time to obtain a cure. Hypersensitivity of the tracheal and esophageal mucous membranes to the roentgen ray is considered a contraindication to its use, and for such patients surgical treatment has been substituted. Early *recurrences* have responded beautifully to relatively small roentgen dosage. In such cases the increased hazard to parathyroids and recurrent nerves from disturbed anatomy, as a result of previous operation, should influence the consultant against further surgery. At times, however, larger recurrences have failed to respond to x-ray and have required reoperation.

The committee encountered an interesting group of 62 children with toxic diffuse goiter. Fifteen were treated by bed rest with or without iodine therapy; in 12 of these the disease was arrested. Five children received x-ray therapy in combination with other medical care, and 4 of them remained well thereafter. Subtotal thyroidectomy was performed for 33, and in 30 the disease was arrested by this means. Two suffered recurrence, and in the third, recurrence developed again after a second operation. From

the experiences of the committee with this group it is felt that subtotal thyroidectomy, or carefully controlled x-ray therapy, is the therapeutic measure of choice in children. Follow-up study of these children showed an absence of postoperative hypothyroidism and an increased tendency for the recurrence of the disease. The committee, therefore, recommends a more radical surgical removal in young patients than in adults.

A very small carefully-selected group of patients with diffuse goiter and low grade hyperthyroidism have had the disease arrested by small doses of iodine (from 3 to 5 drops once daily) continued over long periods of time.

As a major function of this paper, the committee wishes unanimously to protest against the indiscriminate use of iodine in the treatment of toxic goiter. It is our belief that a long period of iodine therapy in toxic diffuse goiter develops an "iodine-fast" gland—a state which either increases the hazard of surgery very greatly or interferes with a proper response to the roentgen ray. Iodine should not be administered if roentgen therapy is to be used. If operation is decided upon, iodine should be prescribed (10 drops three times a day, after meals) in conjunction with sedation and rest in bed for a period of from 10 days to 3 weeks before operation, or until the pulse rate remains below 90 beats per minute. In toxic nodular goiter, rest in bed and iodine often are unnecessary before operation. Neglected cases of either type of toxic goiter may demand careful study of cardiac, renal and hepatic capacity, and may require weeks and even months of special treatment before operation can be performed with safety.

Patients assigned for roentgen therapy receive a treatment (150 r in air) of the tissues on each side of the neck for 6 successive days, a total of 900 r to each lobe. In addition, on alternate days the thymic area receives 150 r, or a total of 450 r. This course is repeated 6 weeks later, and usually a third course is given after another interval of 6 weeks. More technical details of the treatment may be obtained from our Department of Roentgenology.

Through the years, a constant effort has been made to improve our surgical treatment. Several basic principles have been established. Since Plummer popularized the administration of iodine before operation, we have abandoned the multiple-stage plan of surgical treatment as costly, cumbersome and unnecessary. From the technical standpoint we believe in an absolutely complete hemostasis, permitting closure without drainage. Ligatures and sutures are universally of silk. Only careful anatomical dissection under direct vision in a bloodless field can safeguard the parathyroids and recurrent laryngeal nerves, injury to which carries the tragic threat of possible postoperative semi-invalidism. Radical removal increases the sequel of distressing hypothyroidism and the risk of injury to these important structures. After experiences with residues of varying sizes, we are inclined toward a moderate resection



when dealing with the toxic diffuse gland, seeking by complete follow-up to recognize recurrences early, and to arrest them with the roentgen ray. After operation for toxic diffuse goiter it is our practice to prescribe 5 drops of iodine once daily for 1 month, together with rest and moderate sedation. The importance of frequent follow-up visits for several years cannot be overemphasized.

#### CONCLUSIONS

In conclusion, the committee would like to reaffirm:

1. That the nodular goiter presents the dangerous threat of malignant degeneration and therefore demands removal.
2. That toxic diffuse goiter may be treated by partial ablation either surgically or (in selected cases) by x-ray.
3. That in toxic goiter the administration of iodine should be reserved for use in the immediate period before surgery.
4. That resection should be more radical in children than in adults.
5. That, in experienced hands, the mortality rate in thyroid surgery approaches zero and complications have become exceedingly rare.

U. C. Medical Center.

#### HEART UNDER CYCLOPROPANE\*

CLINTON H. THIENES, M.D.

AND

PAUL O. GREELEY, M.D.  
Los Angeles

ALL general anesthetics alter the rhythm of the heart, and produce changes demonstrable by electrocardiography. The most startling cardiac changes occur during the administration of chloroform<sup>1</sup> and of cyclopropane.<sup>2</sup> In order to evaluate the importance of the cardiac arrhythmias occurring during anesthesia, several attempts have been made to study the physiological mechanisms involved.

#### EARLIER STUDIES

Levy drew attention to the possible rôle of epinephrine and the visceral nervous system in the production of ventricular tachycardia and fibrillation during chloroform anesthesia. He observed that injections of epinephrine produced their greatest cardiac effects in cats under light chloroform anesthesia, and that during very deep chloroform anesthesia epinephrine failed to produce ventricular fibrillation. Stimulation of the accelerator nerves, or reflex activation of the sympathetic nerves by electrical stimulation of the sciatic nerve, had effects similar to injections of epinephrine. Until the work of Beattie, Brow

and Long<sup>3</sup> it was assumed that the arrhythmias due to chloroform and epinephrine involved only a peripheral mechanism, and there was no apparent explanation for the paradox of greater arrhythmia during light chloroform anesthesia. Beattie, et al, found that transection of the brain below the hypothalamic nuclei prevented chloroform arrhythmias, and later, Dikshit<sup>4</sup> and Crouch and Elliott<sup>5</sup> clearly established the importance of hypothalamic centers in the production of cardiac and other circulatory irregularities.

#### EXPERIMENTS WITH ANIMALS

Epinephrine and a number of other sympathomimetic drugs injected into dogs under cyclopropane anesthesia cause various types of cardiac arrhythmia, including ventricular extrasystoles; ventricular tachycardia and ventricular fibrillation.<sup>6,7</sup> These effects could not be produced following section of the cardiac sympathetic nerves, nor following paralysis of the sympathetics by ergotamine. These experiments established the importance of the nervous system in relation to the arrhythmias. That the hypothalamic centers are essential for the production of cardiac irregularities by injections of epinephrine in animals under cyclopropane anesthesia, was shown by the failure of appearance of the irregularities in dogs deprived of the function of the hypothalamus.

#### EFFECTS UPON HUMAN BEINGS

In human beings, cyclopropane administration is frequently associated with cardiac irregularities, especially in the third and fourth plane. Guedel<sup>8</sup> has been able to cause disappearance of the ordinary clinical signs of these arrhythmias by increasing the cyclopropane concentration in the breathing bag from 50 to 60 per cent, together with passive respiration (controlled respiration). He reported, further, that induction of anesthesia, by means of intravenous pentothal or evipal, abolished or markedly diminished cyclopropane arrhythmias. This was in harmony with the observation by Robbins and Baxter<sup>9</sup> that amytal protected the animal against the occurrence of cardiac irregularities under cyclopropane. Dikshit<sup>4</sup> had also shown that barbital prevents chloroform-epinephrine arrhythmias.

#### COMMENT

It is then evident, first, that the hypothalamus is in some way involved in, or is essential for the production of cardiac arrhythmias under chloroform or cyclopropane; and, second, that depression of the hypothalamus, either by excessive doses of the inhalation anesthetic or by means of barbiturates, prevents the occurrence of the arrhythmias.

The nature of the arrhythmias is of interest. Seevers, Meek, Rovenstine and Stiles<sup>10</sup> described a wide variety of types of arrhythmia. In our recent experiments<sup>11</sup> we observed principally bradycardia, ventricular extra systoles, ventricular tachycardia and nodal rhythm. These were prominent at concentrations of 25 to 40 per cent cyclo-

\*Read before the Section on Anaesthesiology, at the Seventieth Annual Session of the California Medical Association, Del Monte, May 5-8, 1941.

From the School of Medicine, University of Southern California.



propane in the breathing bag. Arrhythmias of ventricular origin disappeared on increasing the cyclopropane concentration to 50 to 70 per cent. Nodal rhythm, however, when already present, persisted with these high cyclopropane concentrations, and, in two or three instances, appeared at the high gas concentrations when not previously present. Alterations in the T-wave in the dogs were usually associated with morphine premedication or with inadequate oxygen concentration in the breathing bag, and could not be related to the cyclopropane itself.

Except for the changes in the T-wave, the electrocardiographic phenomena are similar to those produced by sympathetic nervous impulses to the heart. As mentioned above, Meek, Hathaway and Orth<sup>6</sup> showed that cyclopropane sensitizes the animal to the effect of epinephrine upon the heart. Because of the fact that both an intact hypothalamus and sympathetic pathway were shown to be essential for the production of cyclopropane-epinephrine arrhythmias, it is evident that some factor, in addition to cyclopropane and epinephrine, is related to arrhythmias, and that this factor is associated with a nerve reflex through the hypothalamus.

#### OTHER OBSERVATIONS

In a recent paper, Allen, Stutzman, Slocum and Orth<sup>12</sup> reported prevention of cyclopropane-epinephrine arrhythmias by sympatholytic substances (ergotamine, yohimbine, etc.) in doses which do not reverse the pressor action of epinephrine. Since, ordinarily, the dose of sympatholytic agent required to abolish the effect of epinephrine on the heart is much greater than that required to abolish its pressor effect,<sup>13</sup> it would seem that these agents are acting by some other than their sympatholytic mechanism in preventing cyclopropane-epinephrine arrhythmias. Wright<sup>14</sup> suggested that ergotamine in very small doses depressed certain vasomotor nuclei. Perhaps, then, these agents prevent cyclopropane-epinephrine arrhythmias through a central, rather than a peripheral action.

It is impossible at present to decide whether the arrhythmias produced by epinephrine in the presence of cyclopropane anesthesia have any relation to clinical cyclopropane arrhythmias. There is no information concerning the concentration of epinephrine in the blood in the various stages of cyclopropane anesthesia. It would seem, though, that administration of epinephrine during cyclopropane anesthesia is contraindicated, but that neosynephrine would be quite safe,<sup>7</sup> since the latter does not produce arrhythmias of importance.

The question of the supposed toxic action of cyclopropane upon the heart is still controversial. Our experiments,<sup>11</sup> using bag concentrations of cyclopropane up to 75 or 85 per cent, in the absence of anoxemia, make doubtful the contention that cyclopropane, like chloroform, is a cardiac poison, or that nodal rhythm is a sign of impending ventricular fibrillation. Because of

other considerations, such as explosibility, as well as because of any theoretical danger to the heart, cyclopropane is an agent which should not be used by the unqualified person, but certainly in the hands of a well-trained and alert anesthetist, it can be used with relative safety, and for controlled respiration, it has no equal.

#### CONCLUSIONS

Arrhythmias under cyclopropane anesthesia are most marked at about apneic concentrations. Deepening the anesthesia with high concentrations (50-75 per cent) of cyclopropane in the breathing bag largely abolishes irregularities of the pulse and does not seem to increase the hazard to the patient. The indispensability of an intact hypothalamus for the production of the arrhythmias suggests that this structure, rather than the intrinsic cardiac tissues, is the site of action of the anesthetic agent in this regard.

3551 University Avenue.

#### REFERENCES

1. Levy, A. G.: The Exciting Causes of Ventricular Fibrillation in Animals Under Chloroform Anesthesia, *Heart*, 4:319, 1912-13; idem: Further Remarks on the Ventricular Extrasystoles and Fibrillation under Chloroform, *ibid.*, 7:105, 1918.
2. Lucas, G. H. W., and Henderson, V. E.: Cyclopropane: A New Anesthetic Gas, *Canad. M.A.J.*, 21:173, 1929.
3. Beattie, J., Brow, G. R., and Long, C. N. A.: Physiological and Anatomical Evidence for the Existence of Nerve Tracts Connecting the Hypothalamus with Spinal Sympathetic Centers, *Proc. Roy. Soc. (B)*, 106:253, 1940.
4. Dikshit, B. B.: The Production of Cardiac Irregularities by Excitation of the Hypothalamus Centers, *J. Physiol.*, 81:382, 1934.
5. Crouch, Richard L., and Elliott, William H., Jr.: The Hypothalamus as a Sympathetic Center, *Amer. J. Physiol.*, 115:245, 1936.
6. Meek, W. J., Hathaway, H. R., and Orth, O. S.: Effects of Ether, Chloroform and Cyclopropane on Cardiac Automaticity, *J. Pharmacol. and Exper. Therap.*, 61:240, 1937.
7. Orth, O. S., Stutzman, J. W., and Meek, W. J.: Cardiac Action of Sympathomimetic Amines in Cyclopropane, Ether and Chloroform Anesthesia, *Amer. J. Physiol.* 126:595, 1939.
8. Guedel, A. E.: Cyclopropane Anesthesia, *Anesthesiology*, 1:13, 1940.
9. Robbins, B. H., and Baxter, J. H., Jr.: Studies of Cyclopropane, VIII, The Effect of Premedication with Morphine or Amytal Upon the Heart Rate, Rhythm, and Blood Pressure in Dogs Under Cyclopropane Anesthesia, *J. Pharmacol. and Exper. Therap.*, 68, 85:1940.
10. SeEVERS, M. H., Meek, W. J., Rovenstine, E. A., and Stiles, J. A.: A Study of Cyclopropane Anesthesia with Especial Reference to Gas Concentrations, Respiratory and Electrocardiographic Changes, *J. Pharmacol. and Exper. Therap.*, 51:1, 1934.
11. Thienes, C. H., Greeley, Paul O., and Guedel, A. E.: Cardiac Arrhythmias Under Cyclopropane Anesthesia, *Anesthesiology* (In Press).
12. Allen, C. R., Stutzman, J. W., Slocum, H. C., and Orth, O. S.: Protection from Cyclopropane and Epinephrine Tachycardia by Various Drugs, *Anesthesiology*, 2:503 (Sept.), 1941.
13. Dale, H. H.: On Some Physiological Actions of Ergot, *J. Physiol.*, 34:163, 1906.
14. Wright, Samson: Studies of Reflex Activity in Involuntary Nervous System, II, Action of Ergotamine on Vasomotor Reflexes, *J. Physiol.* 69:331, 1930.

## SALIVARY GLANDS: PATHOLOGICAL CONDITIONS AFFECTING THEM\*

SAMUEL A. MORRIS, M. D.  
Marysville

IN the practice of otolaryngology, cases with affections of the salivary glands constitute a small proportion of that practice. But not as little as the literature in the special journals of otolaryngology would have us believe. In reviewing the literature for presentation of this paper, the most striking feature was the limited amount of material to be obtained in the special journals.

### INFLAMMATORY TYPES

In considering the inflammations first, a simple classification is presented to better orient ourselves.

Inflammations affecting the salivary glands:

#### 1. *Acute Pyrogenic:*

Observed as a general post-operative complication, or in the course of a debilitating illness.

As an acute inflammation in the course of a chronic inflammation, following a duct obstruction.

#### 2. *Chronic:*

As observed in duct obstruction by a calculus.

#### 3. *Specific:*

Infectious parotitis  
Tuberculosis  
Syphilis  
Actinomycosis

As a general surgical post-operative complication, the gland involved is invariably one of the parotids.

In the acute general infections, such as typhoid, typhus or pneumonia, or in any other debilitating illness, parotitis is not an extraordinary complication.

The teaching has always been that such a complication forebodes an inevitable disintegration. The mortality tables show that 60 per cent die when parotitis under the above conditions occurs.

However, Blair and Padgett reporting on a series of cases where free incision and early drainage was instituted, the mortality was only 26 per cent.

They recommend that, in mild cases, efforts to stimulate salivary secretion, and local application of hot or cold packs be used.

However, with marked local and constitutional signs, or after three days of conservative treatment in which no definite improvement is observed, free incision for adequate drainage and the relief of pressure is imperative.

After healing is complete, the final scar is insignificant. So report Blair and Padgett, and the justifications for this procedure is the low mortality rate of 26 per cent, which included some cases in their terminal stages.

### SALIVARY CALCULI

In the chronic inflammations involving the salivary glands, the chief responsible agent is a salivary calculus.

Calculi occur most often in the submaxillary apparatus—about 90 per cent, less often in the parotid, and infrequently in the sublingual. Salivary calculi vary in size from minute particles to the largest on record, which is two inches in circumference by one and one-half inches long. They assume the larger proportions when occurring in the gland substance.

The etiological factors in their occurrence are said to be poor mouth hygiene, and/or a low grade infection in the gland system. A plug of bacteria or foreign material acts as a nucleus, about which the salivary salts precipitate. The stones are composed mainly of phosphates, with smaller amounts of organic matter, carbonates, calcium, and magnesium.

Symptoms depend upon which gland the calculus involves; the degree of obstruction produced by the calculus, and whether an inflammatory process succeeds upon the retained secretions.

In a consideration of the submaxillary calculi, I recall three cases that typify the varied symptomatology upon the conditions just stated.

### REPORT OF CASES

**CASE 1.**—A woman in the thirties complained of pain in the floor of the mouth, and painful salivary enlargement on the right side at meal times, but not at all meals. Between meals the swelling would subside. Symptoms had been present for about six months. In the past several days, however, the salivary swelling had become larger, more painful, occurred with all meals, and did not completely subside between meals. A small calculus could be felt by combined extraoral and intraoral palpation, just behind the duct opening.

The duct opening was dilated with a lacrimal dilator; then one blade of a fine blunt tipped scissors was introduced into the opening, and the scissors closed. The calculus slipped out easily. The calculus was uneven and about 4 mm. in its widest diameter. The cut duct opening healed without stricture.

The explanation for her symptoms could be based on an inconstant ball-valve action of a small calculus; but as the calculus became larger it occluded the duct at its narrowest point, which is at the papilla.

**CASE 2.**—Was that of a woman of forty, who complained for several years that she could feel a hard object on the floor of her mouth. She confessed that, on occasion, the submaxillary gland would get a little larger. There was never any pain. Curiosity, rather than discomfort, obliged her to seek consultation.

The duct was incised over the stone, and the duct sutured with fine gut. It healed without a fistulous tract. Anesthesia used was local topical application of 2 per cent pontocaine.

This case illustrates that symptoms can be insignificant regardless of the size of the stone, as long as obstruction and infection do not supervene.

**CASE 3.**—The other case is that of a sixty-year-old male. He had been ill for four days with severe pain and swelling in the floor of the mouth. He had been unable to eat, because swallowing was painful. He had fever and appeared in great distress.

The floor of the mouth was acutely edematous, and so tender that examination was impossible. The right submaxillary gland was enlarged with a cervical adenitis on that side as well. The papilla of Wharton's duct on the right was edematous. Dental caries and pyorrhea were extreme.

Treatment immediately instituted was ice packs externally, and frequent hot mouth irrigations.

The next day a calculus could be seen to extrude

\* Read before the Section on Eye, Ear, Nose and Throat, at the Seventieth Annual Session of the California Medical Association, Del Monte, May 5-8, 1941.

through the duct about 20 mm. from the papilla. When picked out with a forceps, a gush of pus followed.

Recovery was rapid, complete and uneventful. However, a small fistula remains which is of no consequence.

#### COMMENT

This case illustrates the severity of the symptomatology following upon an inflammatory reaction. In this case, too, the importance lies in establishing a diagnosis. It could be confused with a cellulitis of the floor of the mouth attendant upon infected teeth, or an infection superimposed upon a malignancy, with metastases to the lymph glands. The important distinguishing features are:

1. A history of previous submaxillary gland involvement.
2. The absence of trismus will rule out a cellulitis of dental origin.
3. In carcinomatous metastasis to the lymph glands, the submaxillary glands would be fixed and indurated, whilst the submaxillary gland when enlarged due to a stone is not fixed, is deeper, and is elastic.
4. One of the most important points of differentiation is an x-ray picture demonstrating a stone.

#### FILMS

The proper technique for an x-ray of the anterior half of Wharton's duct is to place a film in the mouth, held between the upper and lower teeth in the occlusal plane and the x-rays directed beneath the chin. If the posterior part of the duct is to be filmed, the technique introduced by Samuel Iglauer is useful. The floor of the mouth is depressed with the index finger and a lateral film taken. This, of course, cannot be done when there is a severe inflammation of the floor of the mouth.

In filming Stenson's duct for a stone, the best position is an anteroposterior view, so as to avoid the shadow of the ascending ramus of the lower jaw. A small dental film in the mouth over the duct will, in some instances, more clearly demonstrate a calculus.

When calculi involve the gland substance proper, treatment consists in extirpation of the whole gland.

*Infectious Parotitis.*—Infectious parotitis should be mentioned in warning—because the name infectious parotitis limits the disease to the parotid. However, the disease may also involve the other salivary glands. An important diagnostic differentiation between infectious parotitis and other gland enlargement is found in a study of the leucocytes. In infectious parotitis the leucocyte count may be not at all or slightly increased, but the important difference is that there is a relative lymphocytosis and corresponding diminution of the polymorphonuclear leucocytes. Tuberculosis, syphilis, and actinomycosis are mentioned to denote their rare occurrence.

#### TUMORS

Compared to tumors elsewhere, those involving

the salivary glands are relatively infrequent.

For the purpose of correlating and presenting the material on hand in an orderly manner, the tumors have been classified as follows:

1. Mixed tumors.
2. Malignant: carcinoma, sarcoma.
3. Benign: adenoma, lipoma, haemangioma, lymphangioma, ranula, Mickulcz's disease.

I have placed the mixed tumors first, because of all the tumors that involve the salivary glands, about 95 per cent are of the mixed variety, of which about 75 per cent occur in the parotid.

There is no end of controversy regarding their etiology and even treatment.

They have been classified as benign mixed tumors and malignant mixed tumors. The differentiation is misleading and insecure, as the benign tumor of today may be the malignant tumor of tomorrow. The explanation for this lies in its derivation. Most embryologists and pathologists conclude that mixed tumors are the outgrowth of displaced buccal epiblast, from which the parotid is formed. It is, therefore, earlier than the embryonic parotid tissue and so includes mesoblastic elements—to explain the close association of cartilage, myxomatous tissue, and other structures of mesoblastic origin.



Fig. 1—Calculus from Salivary Gland (Case 2).

The histology of the mixed tumor because of its complexity is easily diagnosed microscopically. Beyond that, the microscope cannot reveal whether it will recur when removed or how it will terminate. There is no determining stage when a benign tumor is to become malignant. The conclusion must be reached that mixed tumors are inherently malignant in themselves, and do not, as is often described, undergo malignant degeneration.

A tumor appearing in one parotid in youth or young adult life, which grows slowly without pain or facial nerve involvement, and which does not involve the overlying skin, will most probably be a mixed tumor in its benign stage.

However, after ten years or more have elapsed, and when the tumor grows rapidly, causes pain, involves the facial nerve, and shows other evidence of infiltration, the mixed tumor is malignant.

#### McFARLAND'S STUDIES

Joseph McFarland, reporting on 278 parotid

mixed tumors collected from 27 hospitals, concludes:

"That 21.5 per cent recurred. Recurrences have been reported as late as 47 years after removal."

"There is no metastases and nothing happens unless there be traumatic injury to bring about ulceration, haemorrhage, or infection. Such being the case, there is no need for prompt surgical intervention, for the excision is too apt to be followed by facial palsy, which is a more distressing matter than a lump on the cheek."

Another matter of importance and one in which mixed tumors seem to differ in that recurrence is more frequent when the tumor removed is small.

It appears from McFarland's conclusions, though he does not so conclude, that once a diagnosis of mixed tumor is made, any recurrence following its removal warrants complete extirpation of the gland regardless of the ensuing facial palsy. Those are the opinions of the majority of skilled tumor surgeons.

#### OTHER TYPES

Carcinoma or sarcoma of the salivary glands is rare. They arise in the adult parenchyma, as distinguished from the mixed tumor, which obtains its origin in extra-parenchymal tissue.

The diagnosis features in its main a small hard lump, generally arising in the parotid of an adult usually over forty. It is painful, fixed, grows rapidly, and displays infiltrating characteristics early. They also have a tendency to distant metastases, e.g., to the lungs and bones, as distinguished from mixed tumors, which are locally malignant. In the benign group, the adenoma and lipoma cannot be distinguished from the mixed tumor except microscopically. They are rare diseases.

The most frequent benign tumor involving the parotid is the haemangioma. It is seen at birth or very soon thereafter. The diagnosis is simple, as the haemorrhagic tumor appears only in children. The contents of the tumor can be expressed, which, of course, immediately refills when pressure is released.

*Lymphangiomata.*—Lymphangiomata occur less frequently, and are distinguished by their color, and the inability to empty them by pressure.

Treatment is by excision or radiation.

Ranula is a submucous cystic swelling taking origin in the sublingual gland division. It appears in the floor of the mouth anteriorly, and may attain large enough proportions to interfere with movements of the tongue.

*Mickulicz's Disease.*—Mickulicz's disease proper consists in the symmetrical, painless, non-inflammatory enlargement of the lacrimal glands and one or more pair of salivary glands. There is no involvement of the lymphatic system or alteration of the blood. The general health of the patient is good. The histology is that of lymphocytic infiltration.

Treatment by radiation has been very successful.

Mickulicz's disease proper should be distin-

guished from Mickulicz's syndrome, in which the enlargement of the glands is due to some other well-defined disease, such as leukemia, syphilis, tuberculosis, Hodgkins, or lymphosarcoma.

In conclusion, I daresay that diseases of the salivary glands make up a larger proportion of otolaryngological practice than is realized. Affections of the salivary glands deserve more space in the literature devoted to otolaryngology.

725 Fourth Street.

### VARICOSE VEINS: A SUGGESTED OPERATIVE PROCEDURE\*

AN OPERATION FOR VARICOSE VEINS BASED ON  
ANATOMICAL STUDIES OF INCOMPETENT  
THIGH PERFORATORS

R. STANTON SHERMAN, M. D.  
San Francisco

MUCH as recent advances have improved the diagnosis and treatment of varicose veins, it is still not possible to obtain ideal results in a considerable number of cases because the diagnostic methods available are not precise enough to disclose the exact location of all incompetent or potentially incompetent perforator veins. Although the ligation and division of the main saphenous vein and its branches at the sapheno-femoral junction are well standardized, the destruction of the perforator veins of the mid thigh is often unsatisfactory because, as usually employed, it depends on a blind searching which often fails to produce the desired results.

Because these deficiencies in diagnosis and therapy of incompetent thigh perforators were frequently observed, studies were made on one hundred and twenty-eight patients who had had long saphenous vein ligations combined with retrograde injections of a sclerosing solution. The results of these are shown in Table A. It is to be noted that, while much improvement was obtained by 53 per cent of patients, in 47 per cent the procedure left much to be desired. Indeed, in many cases, the failure was so obvious that further operative therapy was necessary.

The fact that the elimination of incompetent thigh perforators is often inadequate led me to make further anatomical studies on nineteen cadavers, which disclosed some interesting and hitherto undescribed anatomical findings. This led me to alter the surgical technique employed in the treatment of varicosities.

#### ANATOMICAL STUDIES

The perforator veins connecting the saphenous and the femoral systems are quite variable in number and in location. Nevertheless, there are certain rules which nearly always apply. For

\* Read before the Section on General Surgery, at the Seventy-first Annual Session of the California Medical Association, Del Monte, May 3-6, 1942.

From the Division on Surgery, University of California Medical School.



Figure I. Type I. Cadaver 12

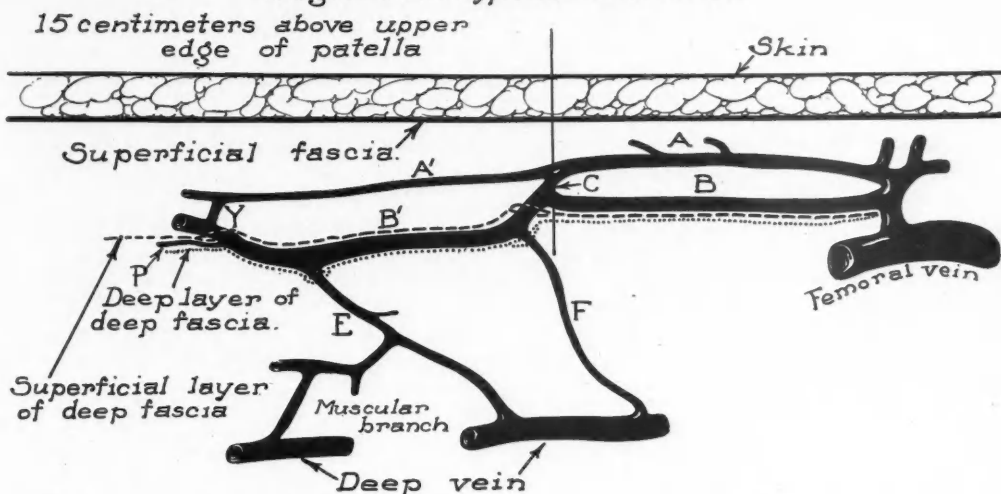


Fig. 1.—Type I: From Cadaver Dissection. The main stems of the saphenous system are shown as AA' and BB'. Note that proximal to connector Vein C, Vein B lies superficial to the superficial layer of the deep fascia, and that distal to Vein C, Vein B' lies between the fascial layers. Perforator veins are shown coming off from Vein B'.

example, the sapheno-femoral junction in the groin is a constant finding. Moreover, there appears to be a basic pattern in the development of the long saphenous stem which is subject to minor variations, and which in large part governs the location of the thigh perforator veins. According to my studies the common embryonic pattern of the saphenous system appears to consist of two saphenous stems in the thigh (Type I,

Fig. 1), and while both of these veins are found in the expected location superficial to the deep fascia in the upper thigh, the main saphenous vein pierces the superficial layer of the deep fascia in the midthigh area, whereas the accessory vein remains superficial throughout its entire course (A, A'). The vein which runs beneath the superficial layer of the deep fascia (B') assumes great importance, because it is from this vein

Figure II Type II Cadaver 7.

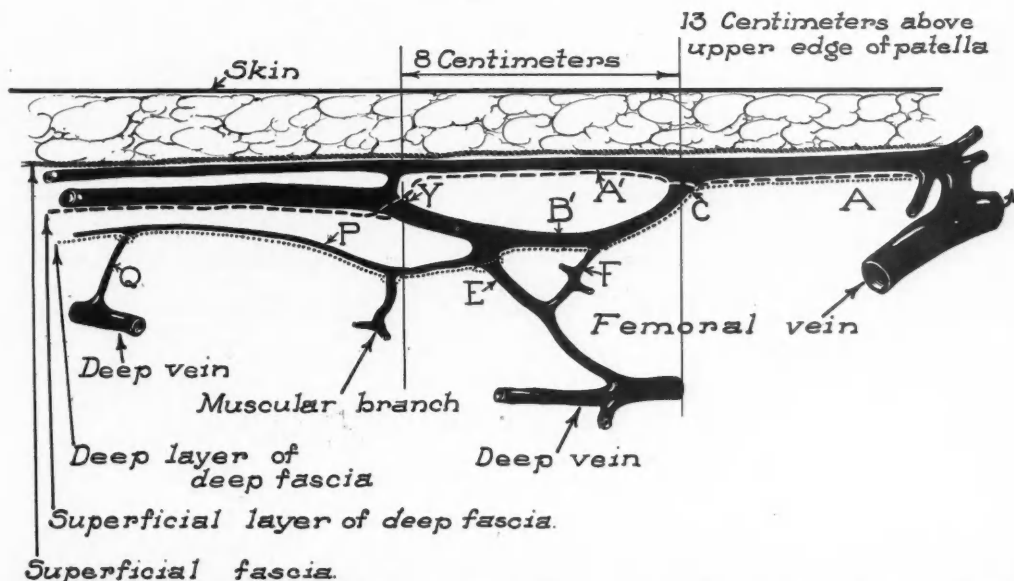


Fig. 2.—Type II: From Cadaver Dissection. Note that Vein B is absent. The branch P from Vein B' gives off an additional perforator vein (Q).

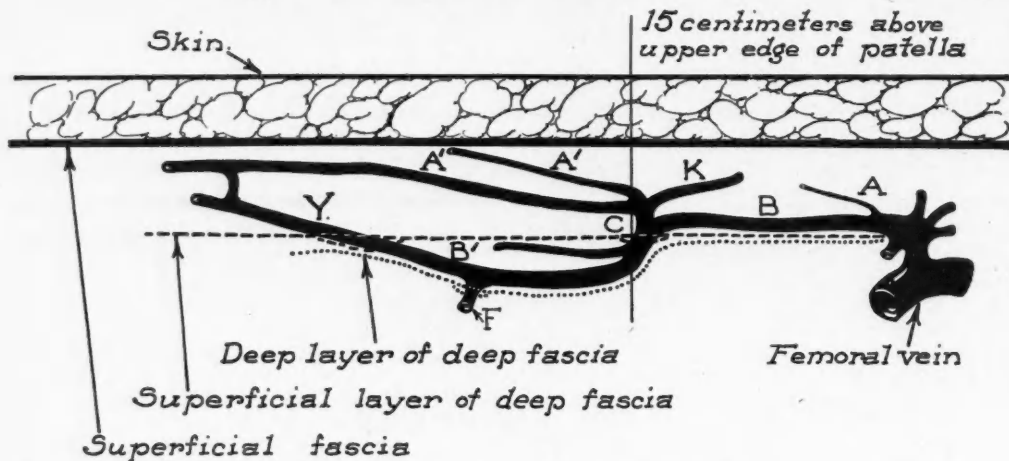
*Figure III. Type III Case 97*

Fig. 3.—Type III: From Surgical Dissection. Note that Vein A is rudimentary.

that the main perforator branches which connect with the deep veins of the thigh arise (E, F). After coursing down the leg for five or more centimeters this saphenous vein usually branches again. One branch emerges from beneath the superficial layer of the deep fascia (Y) to re-occupy its position superficial to the deep fascia, while the other branch (P) continues down the thigh and leg between the deep fascial layers. Despite careful search of the anatomical text books and the literature of this subject, no mention of this relationship of the saphenous vein to the deep fascial layers has been found; yet, obviously, utilization of this knowledge would do much to improve the treatment of thigh perforator deficiencies. Figure 5 shows the relationship of the two saphenous stems to the superficial layer of the deep fascia in the fetus.

From a study of nineteen cadavers and over one hundred operative cases, it appears that this

general pattern shows three variations in type (Type II, III, IV). Type II (Fig. 2) is the same as Type I, except that Vein B is absent. Type III (Fig. 3) is also the same except that Vein A is absent. Type IV (Fig. 4) is again like Type I, except for the apparent absence of Vein A'. No case has been observed in which Vein B' is absent. Any of these veins may be double or even triple, and considerable variation has been observed of the manner in which branches connect them with the deep circulation. The crux of the entire treatment of incompetent thigh perforators depends, therefore, on a full realization of the importance of this pattern, and especially of the rôle played by Vein B'. The elimination of all these veins—A, A', B, B' and P—should prevent reflux flow of blood from the deep veins of the thigh by severing those incompetent veins which communicate between the deep and superficial system.

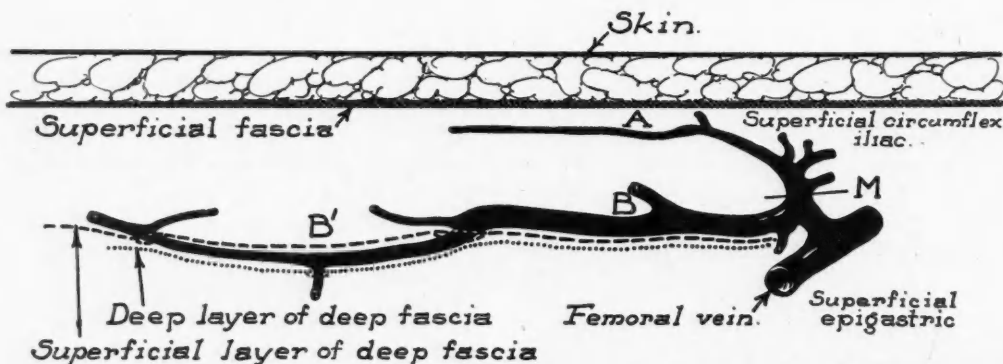
*Figure IV. Type IV Case 132.*

Fig. 4.—Type IV: From Surgical Dissection.—This figure illustrates danger of mistaking a superficial vein (A) for the main saphenous when ligation of the saphenous vein alone is practiced. (See text.)

## SURGICAL APPLICATIONS

With the vein arrangement shown in Fig. 1, an ordinary Mayo stripping procedure and ligation of Vein A, would eliminate Vein A and A', and disconnect the upper part of Vein A from the femoral vein; but the Veins B, B', C, E and F would remain open and, if incompetent, would prevent a satisfactory result. If, however, Vein B and B' and Vein C were also excised, one would expect marked improvement because, aside from the ligation of the saphenous vein at the sapheno-femoral junction and elimination of Veins A, A', B, B' and C, the Veins E and F would also be severed.

In Fig. 2, another problem is presented. Here the Mayo stripping of Vein A and A' would sever Vein C, but would not eliminate the branches E and F which also connect the deep veins of the leg. However, if Vein C, B' and P were excised by the stripping procedure, branches E, F and Q would be cut across. This would definitely aid in eliminating the reverse flow of blood in the incompetent thigh veins. Thus, it becomes apparent from cadaver dissections, that Vein C and B' are of great importance, for most of the veins connecting with deep system are branches of Vein B'.

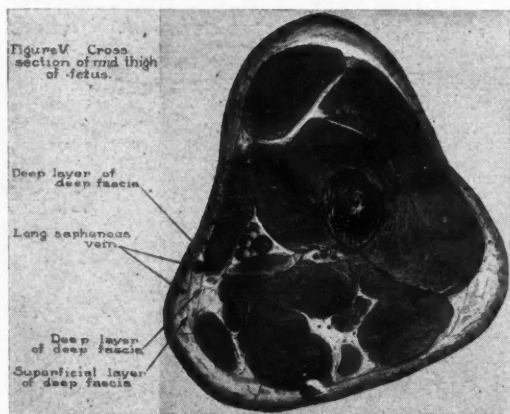


Fig. 5.—Cross Section of Midthigh of Fetus. Note the two stems of the saphenous system which are separated by the superficial layer of the deep fascia.

The surgical approach is based upon the information yielded by the anatomical studies which have just been described, a procedure which, in my hands, has materially improved the results of varicose vein therapy. Moreover, it involves a minimal amount of trauma and has the advantage of keeping patients in bed for only short periods of time. It consists of a combination of vein injection, high saphenous vein ligation and vein stripping. The basically-new approach is the employment of sclerosing solution as an agent for the suppression of hemorrhage from the long saphenous vein and its branches, so that vein stripping can be performed without the danger of

postoperative hemorrhage. Patients can be out of bed and active within twenty-four hours. This early activity combined with firm thrombosis of the cut veins also reduces the danger of lung infarcts by emboli.

TABLE A.—Results of Studies on Cases Treated by High Ligation and Retrograde Injection of Sclerosing Solution

Total cases examined.....	128
Total number of legs.....	190
Number of faulty high ligations.....	9 legs
Average elapse of time since operation.....	2.6 years
*Reflux flow of blood in 0—15 sec.....	89 legs—47%
*Reflux flow of blood in 16—40 sec.....	101 legs—53%
*75—100% improvement.....	84 legs—51%
*50—75% improvement.....	44 legs—23%
*Under 50% improvement.....	50 legs—26%

\*Multiple tourniquet test were employed and observations were taken with tourniquet applied at groin, so as to rule out any inaccuracy of the high ligation procedure.

## OPERATIVE PROCEDURE

Varices below and slightly above the knee are thoroughly sclerosed by local injection. Under local, spinal, or general anaesthesia the sapheno-femoral junction is exposed through a longitudinal incision. When the long saphenous vein is identified, a temporary ligature is applied and the vein is subjected to the retrograde injection of a sclerosing solution. An interval of ten to fifteen minutes is then allowed to elapse, during which time the saphenous vein and its upper branches are exposed, ligated, and divided. This procedure of high ligation of the saphenous vein is now so fully standardized, that comment on this aspect of the operation is unnecessary.<sup>1</sup> At the end of this interval of time, it will be found that the sclerosing solution has caused thrombosis in the affected vessels, which usually prevents bleeding when they are cut across. It is important, however, to test the effectiveness of the sclerosis by releasing the temporary ligature and observing that bleeding does not occur from the open end of the vein. If, in rare instances, bleeding should occur, the vein is again subjected to an injection with sclerosing solution. It may be stated here, that the effectiveness of sclerosis as a hemostatic agent is in direct proportion to the ability of the sclerosing solution to injure the intima of the vein. If, in any case, there is a doubt that the sclerosis effectually suppressed all hemorrhage, the offending vessel should be ligated or, if perchance the bleeding vessel cannot be located, firm bandaging of the leg should control any bleeding.

TABLE B.—Classification According to Types

Total cases operated.....	43
Total number of legs.....	67
Number of legs, Type I.....	7
Number of legs, Type II.....	41
Number of legs, Type III.....	3
Number of legs, Type IV.....	16

The next step is the elimination of the thigh perforators. Although Vein C is usually located

within a distance of twelve to twenty centimeters above the upper edge of the patella, its exact position is quite variable. Three procedures have been found helpful in locating it. First, the mid thigh area is inspected to ascertain if a dilated bulbous varix is present. If so, Vein C is extremely likely to be near it. Secondly, a small looped Mayo stripper or a Babcock probe may be inserted inside the vein and forced down until obstruction is encountered. Third, a Mayo stripper may be placed outside the vein, the vein being stripped caudally until rather marked resistance is met. (In the latter case, the superficial femoral branches of the saphenous vein must not be confused with Vein C.) Vein C is usually found at this point of resistance. When it is located a longitudinal incision about 7 cm. in length is made over the area. Vein C is identified and separated from Vein A. Once identified, it is simple to ascertain the fact that Vein C pierces the fascia. In fact, in order to strip Vein C and B', it is usually necessary to direct the loop of the Mayo stripper cephalad in order to engage Vein C through the opening in the superficial layer of the deep fascia. Vein A' and Vein C and the latter's continuation B' are then excised by stripping to a point at least ten centimeters below the knee. From operative cases it appears that the Veins P and B' below point E vary in size and importance in different cases (Fig. 2). If one of these is large, the other is usually small. The Mayo stripper tends to follow the larger vein, so that while in some cases the stripper below point Y will run above the superficial layer of the deep fascia, in others it travels under this fascial layer.

Two examples illustrate some of the technical problems encountered. Occasionally, as in Fig. 4, Vein A is found supplying only the upper thigh, and stripping fails to trace it beyond the mid thigh, in which event one may expect to find Vein B of substantial size. Here connecting Vein C may exist, but is so small that its identification is impossible. Also it is very important to note that Vein B could easily be mistaken for the femoral vein, and hence, should a ligation be performed as indicated by line M, the procedure would leave Vein B patent and the operative procedure would fail to accomplish its purpose.

Fig. 3, depicts an interesting variation. The pattern of the veins is nearly opposite to that shown in Fig. 2. It is seen that Vein A is only rudimentary. The area usually supplied by Vein A is probably drained by the superficial circumflex iliac above and by the ascending continuation (Vein K) branch of Vein C, below. Vein B descends to a point fifteen centimeters above the upper edge of the patella where it divides into several branches. One of the branches from Vein C immediately divides into three superficial veins. One branch (Vein K) representing Vein A, ascends toward the upper thigh, while two branches (representing Vein A') take a downward course. Incidentally, Vein B' is also represented by two veins, one of which is much smaller than its partner.

#### DISCUSSION

The recognition of the occurrence of anatomical Types I, II, III and IV has grown, as stated, from observations on over one hundred Mayo stripping operations performed between August 1, 1940 and September 1, 1941, and from dissections of nineteen cadavers. Since these types have been clearly recognized, forty-three additional cases have been operated upon. Their type distribution is shown in Table B. In this preliminary report, no attempt has been made to indicate the late effects of the procedure, since insufficient time has elapsed for proper evaluation. It would appear, however, that the method should reduce the incidence of recurrence. It is interesting that in the entire group of 146 cases no massive hematomas, and no pulmonary embolisms have occurred.

#### SUMMARY

1. It is shown that a general scheme of arrangement of the saphenous system in the thigh exists and that variations are common.

2. The occurrence of a heretofore unrecognized location of the saphenous vein between deep fascial layers, and of more or less constant connecting veins perforating the deep layer of the deep fascia in the mid thigh, is described.

3. Suggestions are made for what appears to be a more effective operative therapy.

4. These anatomical variations seem to be divided into four main types whose surgical significance is emphasized.

516 Sutter Street.

#### REFERENCE

1. Stalker, Leonard K., and Heyerdale, Wm. W.: Factors in Recurrence of Varicosities Following Treatment, Surg., Gynec. and Obst., 71:723 (Dec.), 1940.

#### TYPHUS FEVER IN CALIFORNIA\*

WILTON L. HALVERSON, M.D.  
Los Angeles

IN his very entertaining and instructive story of typhus fever, which he entitled "Rats, Lice and History," Hans Zinsser quotes from the Cronica Cavense, an Italian manuscript, what is perhaps the earliest known record of typhus fever.

"In the year 1083, in the monastery of La Cava (near Salerno), in the months of August and September, there spread a severe fever with peticuli—and parotid swellings, in which one sees clearly the difference which is found from the Pest, a fever of a different kind and—in this case—accompanied by petechial spots."<sup>1</sup>

Typhus fever is accurately described by Girolamo Fracastoro in his treatise on Communicable Disease, *De Contagione*, published in 1546. It has played a major rôle in history, and time after time has dictated the outcome of war, not always favoring the strong. The causative agent is *Rickettsia prowazeki*. There are two forms: the

\*Read before the Third General Meeting, at the Seventy-first Annual Session of the California Medical Association, Del Monte, May 3-6, 1942.

From the Los Angeles County Health Department, and the Division on Public Health of College of Medical Evangelists.



epidemic, Old World louse-borne disease; and the endemic flea-borne, murine variety.

Epidemic typhus is nearly always associated with war, famine and oppression. It strikes when mankind is in the depths of misery and wretchedness, when society is already disorganized.

Charles Nicolle, in 1909, discovered that epidemic typhus is spread by the body louse, *Pediculus corporis*, by direct transfer from one human to another, and thus gave man his first advantage in the unequal combat. As far as is known, man is the primary host, although the disease may be kept alive in rodents during inter-epidemic periods. The body louse, while not now prevalent in many parts of the civilized world under normal conditions, quickly multiplies under abnormal conditions which favor filthiness and malnutrition.

#### EPIDEMIC AND ENDEMIC TYPHUS

There were two severe epidemics of typhus in Europe during and shortly after World War I. In Serbia, in 1915, typhus caused 150,000 deaths, and in Russia in 1916-1922 there were tens of millions cases and millions of deaths. No accurate records were kept.

The other type, endemic, flea-borne or murine typhus, has not occurred in epidemics. It is sporadic in nature, with greatest incidence in late summer and fall, in contrast to the epidemic type which is more prevalent in winter. It was shown by Dyer and his associates of the U. S. Public Health Service, in 1931, to be spread by the rat flea *Xenopsylla Cheopis*.<sup>2</sup> The primary host is the gray rat and possibly other rodents. In the United States it was first diagnosed in 1913 by Paullin in Atlanta, Georgia.<sup>3</sup>

During the past decade, cases have increased in numbers in the United States until in 1941, 2,780 cases were reported. The disease in California cannot at present be considered serious from the standpoint of numbers of cases or severity, but the prevalence of rats in most sections makes it a potential menace. This is especially true in light of troop concentrations, defense activities and possible military operations.

The exact relationship of epidemic to endemic typhus is not known. Serologically and immunologically they are not distinguishable.<sup>4</sup> There is reason to believe that murine typhus, transmitted to man by the rat flea, may become epidemic, and in recent years murine infection has been found in areas where epidemic typhus prevails.

The relationship of Brill's disease, which was first recognized in New York in 1898, is not definite. It resembles endemic typhus in that it seems to have no relation to louse infestation, is not transmitted from person to person, and has a seasonal prevalence similar to the cases reported in southeastern United States.<sup>4</sup> Attacks occur most commonly in immigrants who have had typhus fever years previously in the Old World, and may be recrudescences of previous infection.<sup>5</sup>

Typhus fever is distributed widely throughout the world. The epidemic variety is found in Europe, Asia and Africa. The endemic type is

found principally in the New World, the Mediterranean basin and in the East Indies, a present seat of world conflict. It is also scattered in other sections. Table 1 indicates the increased incidence of typhus in certain areas of Europe and North Africa, in 1941. In spite of this data, Dyer does not believe that typhus fever will be a serious problem in Europe in the immediate future.

TABLE 1.—Typhus Fever in Certain Countries of Europe and Africa: 1940-1941

Place	Cases	
	1940	1941
<b>EUROPE</b>		
Bulgaria .....	155	284
Germany .....	230	2,158
Poland .....		3,786
Spain .....	14	9,560
Turkey .....	533	704
<b>AFRICA</b>		
Algeria .....	2,146	12,827
Egypt .....	3,636	9,324
Morocco .....	355	1,471
Tunisia .....	651	7,078
Union of South Africa .....	298	780

#### TYPHUS IN THE UNITED STATES

In the United States typhus fever has been reported principally from the southeastern states and California. It is possible, however, that cases may be missed in areas where it is not expected. Therefore, patients with influenza-like symptoms, who develop a discrete maculopapular rash not consistent with the common exanthemata from three to six days after the onset, should be suspected of having typhus and diagnostic laboratory checks carried out.

Chart II indicates a rapid increase of the disease in the United States during the past decade. The factor of more common recognition probably accounts for a proportion of the increased reports, but the variations in trend indicate that this is not the only factor. Endemic typhus is probably a comparatively new disease in this country.

TYPHUS FEVER CASES REPORTED IN THE UNITED STATES—1929-1941

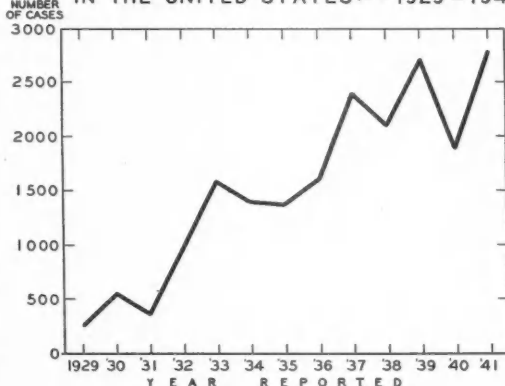


Chart II

In California typhus fever was reported as early as 1916. From that time to April, 1942, 229 cases have been reported. Of these, 157 were

from Los Angeles County. Chart III shows a period of increased incidence of reported cases in California from 1921 to 1924 and again from 1936 until the present time.

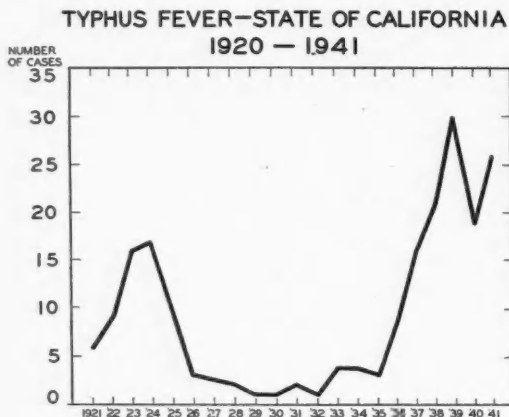


Chart III

Thirty-seven cases of typhus fever were hospitalized in the Los Angeles County Hospital from July 1, 1939 to April 1, 1942. A study of these cases shows no great variation from the clinical picture of cases reported from the southeastern section of the United States.

In California endemic typhus is more prevalent in the last three months of the year. In the southeastern part of the United States the period of greatest incidence is somewhat earlier.

Endemic typhus is three times as common in males as in females, and is more prevalent in adults of active working age than in children or the aged. It occurs most commonly in those who live or work in close proximity to rats.

From the standpoint of control, epidemic and endemic typhus must be regarded as distinct entities. In the one case, the eradication of rats is the solution. In the other, frequent delousing and scrupulous cleanliness is of prime importance.

The California State Department of Public Health has inaugurated a typhus fever survey. At the present time the Los Angeles County Health Department is carrying out a rodent control project. Rats are being taken alive, combed and the fleas sent to the Hooper Foundation laboratory for checking. Thus far no rickettsia have been isolated.

#### VACCINATION

Typhus fever can be prevented by immunization, but thus far no vaccine has been used extensively enough to be of proven merit. Vaccines are of two types, live and killed. Live vaccines have been developed by Nicholle and other workers. They will prevent typhus, if properly prepared, but have been largely discarded because of the danger of producing serious attacks of the disease.

Killed vaccines, utilizing the louse as the agent

to multiply the rickettsia, have been prepared and described by several investigators, including Weigl.<sup>7</sup> He inoculated lice by rectum, and allowed the lice to feed on immune humans in order that the rickettsia might multiply, then dissected out the intestines which, after preparation, constituted the vaccine. One hundred lice are required for a dose sufficient to immunize one person. This method, impractical for immunizing the general population, might be utilized for protecting nurses and doctors in time of epidemic.

Zinsser<sup>8</sup> prepared vaccines by growing the rickettsia in the peritoneal cavities of rats, which had been subjected to preliminary injections of benzol and olive oil, or to preliminary x-ray treatment. He also used vitamin deficient guinea pigs in the same manner with good results.

In 1939, Castaneda<sup>9</sup> reported a method of multiplying rickettsia by the intranasal inoculation of endemic strains in rats and mice. This results in a rickettsial pneumonia and produces enormous numbers of organisms. Formalized emulsions produce immunity against infectious doses of similar strains both in animals and in man. Other investigators have produced vaccine by this method, using epidemic strains.

Cox,<sup>10</sup> of the U. S. Public Health Service, reported preparation of a vaccine from rickettsia grown in the yolk sac of a seven-day chick embryo. Five to seven days later, upon the death of the embryo, the crop of rickettsia is harvested and prepared.

Meyer<sup>11</sup> has stated that the Castaneda vaccine offers the most practical promise of effective protection, and Dyer<sup>12</sup> indicates that both the Castaneda and Cox vaccines should be effective. Both are under extensive clinical trial in South America and Europe at the present time.

#### CLINICAL OBSERVATIONS

The incubation period of endemic typhus varies from six to fourteen days, as shown by laboratory investigation and where a history of flea bite is obtainable. In the thirty-seven cases studied at the Los Angeles County General Hospital, only one patient was aware of having been bitten by fleas. In this instance the period between the flea bite and the onset was fourteen days.

The onset is usually abrupt with fever, chills, severe headache, and generalized muscular aching. In mild cases the onset may be gradual, with malaise and increasing fever. Bronchitis, with severe coughing, may be present. There is often photophobia. Lethargy and mental apathy is marked in severe cases. Delirium may be present. Gastro-intestinal upset, with vomiting and diarrhea or constipation, may occur. In most instances the temperature reaches a peak of from 101 to 105 within the first week of the disease. It remains elevated from ten to sixteen days, then usually falls rapidly.

Until the characteristic rash appears on the fourth or fifth day, the diagnosis is usually thought to be influenza. If the patient is under careful observation, the first macules will usually

be seen on the chest, and from this location they spread over the abdomen and back and on to the extremities. The lesions are less common distally, and are rarely found on the palms, soles and face. The lesions are usually flat, but may be slightly elevated. They vary from 1 to 4 mm in size, and when they first appear are usually pinkish in color. In severe cases they tend to become purpuric or may be purpuric from the beginning. The duration of the rash is from three days to two or three weeks. In general, it tends to be transient in mild cases.

#### LOS ANGELES CASES

In the thirty-seven patients who were under observation at the Los Angeles County Hospital, the onset was abrupt in twenty-four instances and gradual in thirteen. Thirty-two of the thirty-seven reported chills at the onset. In fifteen instances this symptom was present for the first four or five days of illness. The maximum temperature ranged from 101 to 105.6, with an average of 103.5.

Every patient except one reported headache as a prominent symptom. In many instances the headache was described as heavy, frontal, or bilateral, continuous and very difficult to relieve. Twenty-two patients reported generalized aching, in most instances of the large muscles. Backache was present in fifteen cases.

Six of the thirty-seven afflicted were markedly apathetic or stuporous, and in two instances delirium was present.

Gastrointestinal symptoms were relatively infrequent. A dry, dirty, sordid mouth was an annoying feature of three severe cases. Nine patients reported vomiting, and in four additional instances nausea was present. In five instances diarrhea was noted and in three instances marked constipation was mentioned.

The rash was seen most commonly on the fifth day of illness. In eight patients it was not noted until the seventh, eighth or ninth day; but in each of these cases the patient was hospitalized on the day the rash was first seen. The rash was variously described as macular, maculopapular and discrete; and in color, pink to deep red and purple. In most instances it was much more prominent on the trunk and on the proximal parts of the extremities. In only two instances did it appear on the palms and soles.

The white blood count is usually not elevated in endemic typhus. Of the thirty-seven cases studied, sixteen had counts below 7,500 and in only eight cases was the count above 10,000.

The Weil-Felix test, using Proteus strain, OX<sub>19</sub>, was carried out in all cases. The maximum positive titre ranged from 1/40 to 1/20,480, with an average of 1/1280. In eight instances the titre did not reach 1/320, but in the majority of cases it had passed this level before the tenth day of illness. Dr. Dyer<sup>12</sup> emphasizes the specificity of the complement fixation test as developed by Bengtson,<sup>13</sup> using rickettsia grown by the yolk-

sac method as the antigen. This test is specific, and differentiates Rocky Mountain Spotted Fever which cannot be differentiated from typhus by the Weil-Felix reaction. The symptoms of epidemic typhus are of the same nature, but much more severe.

#### DIAGNOSIS

The disease most commonly in this country confused with typhus fever after the rash appears is Rocky Mountain Spotted Fever. Both diseases are caused by rickettsia. The prodromal symptoms are similar, and in both a rash occurs several days after the onset. In Rocky Mountain Spotted Fever, however, the disease most commonly occurs in spring and early summer. There is usually a positive history of tick bite, the clinical course is much more severe, the white count is usually elevated, and the rash is more pronounced on the extremities and is commonly found on the face, hands and feet. The diseases can be differentiated by the complement fixation test or animal inoculation.

Measles may be confusing in those cases in which photophobia occurs as a prodromal symptom. Those cases having a gradual onset may be differentiated from typhoid fever by blood culture and agglutination tests. As has already been noted, the preëruptive stage is very similar to that of the early case of influenza. In the Tropics, malaria must be differentiated.

#### COMPLICATIONS AND TREATMENT

The complications of typhus fever of the endemic type are rare. Bronchopneumonia is the most frequent and occurs most commonly in the aged. In the thirty-seven cases studied, bronchopneumonia occurred twice and lobar pneumonia once. Other complications, none of which occurred in the group studied, include phlebitis, acute myocarditis and thrombosis. Gangrene of the skin is common in epidemic typhus.

The treatment of endemic typhus is symptomatic. Convalescent serum has been used, but probably is not of great value. In severe cases good nursing care is of prime importance.

The case fatality rate of endemic typhus fever is low. No deaths occurred in the group studied. In the 229 cases reported in California since 1916,<sup>14</sup> there have been five deaths, or a rate of 2.2. The case fatality rate for the United States for 1940 was 5.2 per cent. Most deaths occur in the aged.

#### SUMMARY

Typhus fever of the endemic type is prevalent in southeastern United States and occurs in California. 2780 cases were reported in 1941.

Typhus fever is spread widely over the world, and in Europe epidemic typhus is increasing. The disease presents a grave potential danger in the light of present conditions.

Prevention by vaccination is in the trial stage, and favorable results are anticipated.

Thirty-seven cases hospitalized in the Los Angeles County Hospital were studied. Clinical symptoms are influenza-like, with a superimposed maculo papular rash appearing the third to the sixth day. The case fatality rate of endemic typhus averages less than 5 per cent.

800 North Spring Street.

#### REFERENCES

1. Zinsser, Hans, *Rats, Lice and History*, p. 242.
2. Dyer, D. R., Ceder, E. T., Lillie, R. D., Rumreich, A., and Badger, L. F., *Public Health Reports*, 46: Aug. 7, Oct. 9, Oct. 16, 1931.
3. Paullin, J. E., *Southern Medical Journal*, 6:36, 1913.
4. Dyer, R. E., *American Journal of Tropical Medicine*, 21:163, 1941.
5. Zinsser, Hans, *New England Journal of Medicine*, 209:815, 1933.
6. *Science News Letter*, 41:188, 1942.
7. Weigl, R., Quoted from Dyer, R. F. *Annals of Internal Medicine*, 15:629, 1941.
8. Zinsser, Hans, and Castaneda, M. R., *Journal of Experimental Medicine*, 52:865, 1930, *Ibid*, 57:381, 1933.
9. Castaneda, M. R., *American Journal of Pathology*, 15:467, 1939.
10. Cox, H. R., *Public Health Reports*, 53:2241, 1938.
11. Meyer, K. F., *Personal Communication*, 1942.
12. Dyer, R. E., *Personal Communication*, 1942.
13. Bengtson, Ida A., *Public Health Reports*, 56:649, 1941.
14. California statistics through courtesy California State Department of Public Health.

## CLINICAL NOTES AND CASE REPORTS

### MEDICAL AID IN THE U.S.S.R. ARMY\*

CHARLES L. RUBENSTEIN, M.D.  
San Francisco

IN a previous article published in *CALIFORNIA AND WESTERN MEDICINE*, in December, 1941 (page 304), I quoted from the well-known Doctor Burdenko who stated that total warfare, as carried on today, has transformed medical service in the army to an extent heretofore undreamed. Indeed, modern war creates innumerable problems different from those encountered during periods of peace.

Total warfare brings with it casualties previously unknown. Thermal injuries, blast and crush injuries, such are the nomenclature of modern multiple wounds, with marked tissue destruction and contamination resulting in early virulent sepsis. Considerable attention was paid to the prevention of frostbite in the Russian counter offensive which took place last winter. Brigadier Surgeon Professor Gorinevskaya emphasizes the fact that she does not know of a single case of a wounded man contracting frostbite during evacuation. The use of heated ambulances, as well as frequent and warm feeding stations set up along ambulance routes, reduced

frostbite casualties tremendously. Soldiers at the front afflicted with frostbite were treated by the open section method, with the help of physiotherapy, and with prophylactic injections of antitetanus serum.

There is no question but that the difficulties and complexities of modern warfare require a streamlined, efficient approach. How well the Red Army medical service is coping with the situation is illustrated in an article written by the same Brigadier Surgeon Gorinevskaya. She relates that the Red Army medical service has an extensive network of medical and surgical set-ups on evacuation routes with highly qualified physicians in charge of each of these stations. Medical personnel is trained to render adequate care under any condition, in tents, huts, dug-outs, etc.

Many lives have been saved by supreme devotion on the part of medical personnel and the civilian population. Its blood transfusion service is indeed a bright page in the history of Soviet military medicine. It has blood banks in practically every city. Blood in thermostats is speedily dispensed by airplane to any emergency point. Obviously, rapidity is essential in reducing death from anaerobic gas-infection by timely injection of prophylactic and curative serums, and by surgical intervention. As a result of this treatment, 70 per cent of hospitalized wounded have been restored to active duty.

The heroism of the doctors has been noteworthy. For example, once while Professor Vichnevsky was operating on an army officer, an enemy plane shot the officer in the leg. The surgeon calmly completed the original operation, then immediately proceeded to the second and extracted the bullet. This doctor also drew blood from his own vein during an operation in order to save the life of a young girl injured when an air-raid shelter was blown to pieces by a direct hit.

It is interesting to note that Soviet hospitals are highly specialized, each receiving casualties of a particular type of wound. Such specialization has been fully justified. Figures show that, compared with the war of 1914-18, death casualties from all causes in the present war have dropped 33 per cent. Casualties from head, jaw and thorax wounds have dropped 50 per cent, and those from injury to the spinal column 80 per cent.

In spite of being tremendously overworked, Soviet doctors have never lost their interest in scientific work. Conferences are frequently held, experiences exchanged, analyzed, summarized and, as a result, form a sound basis for the development of field surgery. Doctor Yudin recently reported a method of treating brain concussion that resulted in complete recovery in the majority of cases. Military Surgeon Shefter reported treatment of severed nerves by grafting specially-treated segments of animal nerve tissue. Dr. Davidov invented a method of freezing blood plasma for transportation and storage. Professor

\* Information contained herein has been secured through personal correspondence with Russian colleagues, from Russian medical journals, and from the "Information Bulletin" of the Embassy of U.S.S.R.

(Continued on Page 175)



# CALIFORNIA MEDICAL ASSOCIATION

This department contains official notices, reports of county society proceedings and other information having to do with the State Association and its component county societies. The copy for the department is submitted by the State Association Secretary, to whom communications for this department should be sent. Rosters of State Association officers and committees and of component county societies and affiliated organizations, are printed in the front advertising section on pages 2, 4 and 6.

## CALIFORNIA MEDICAL ASSOCIATION†

WILLIAM R. MOLONY, SR., M.D. .... President  
KARL L. SCHAUPP, M.D. .... President-Elect  
LOWELL S. GOIN, M.D. .... Speaker  
PHILIP K. GILMAN, M.D. .... Council Chairman  
GEORGE H. KRESS, M.D. .... Secretary-Treasurer and Editor  
JOHN HUNTON .... Executive Secretary

### EDITORIAL BOARD

#### Chairman of the Board:

Dwight L. Wilbur, San Francisco.

#### Executive Committee:

Dwight L. Wilbur, San Francisco, Chm.  
Fred D. Heegler, Napa.  
Albert J. Scholl, Los Angeles.  
George W. Walker, Fresno.

#### Anesthesiology:

Charles F. McCuskey, Glendale.  
H. R. Hathaway, San Francisco.

#### Dermatology and Syphilology:

H. J. Templeton, Oakland.  
William H. Goeckerman, Los Angeles.

#### Eye, Ear, Nose and Throat:

Frederick C. Cordes, San Francisco.  
L. G. Hunnicutt, Pasadena.  
George W. Walker, Fresno.

#### General Medicine:

Garnett Cheney, San Francisco.  
George H. Houck, Los Angeles.  
Mast Wolfson, Monterey.

#### General Surgery (including Orthopedics):

Frederick C. Bost, San Francisco.  
Clarence J. Berne, Los Angeles.  
Fred D. Heegler, Napa.

#### Industrial Medicine and Surgery:

John E. Kirkpatrick, Shasta Dam.  
John D. Gillis, Los Angeles.

#### Plastic Surgery:

George W. Pierce, San Francisco.  
William S. Kiskadden, Los Angeles.

#### Neuropsychiatry:

John B. Doyle, Los Angeles.  
Olga Bridgman, San Francisco.

#### Obstetrics and Gynecology:

Erle Henriksen, Los Angeles.  
Daniel G. Morton, San Francisco.

#### Pediatrics:

William A. Reilly, San Francisco.  
William W. Belford, San Diego.

#### Pathology and Bacteriology:

Alvin J. Cox, San Francisco.  
R. J. Pickard, San Diego.

#### Radiology:

R. R. Newell, San Francisco.  
Henry J. Ullmann, Santa Barbara.

#### Urology:

Lewis Michelson, San Francisco.  
Albert J. Scholl, Los Angeles.

#### Pharmacology:

Chauncey D. Leake, San Francisco.  
Clinton H. Thlenes, Los Angeles.

## CALIFORNIA COMMITTEE ON PARTICIPATION OF THE MEDICAL PROFESSION IN THE WAR EFFORT†

### Medical Journals: For Colleagues in Military Service

In this issue appears editorial comment on a plan to forward medical journals to the Hospital Stations of Army, Navy and Air Force camps now located in California.

This work is being carried on by the California Medical Association—through its Committee on Post-graduate Activities—in coöperation with the medical libraries of the University of California, Stanford, and the Los Angeles County Medical Association.

This notice will appear in this department every month.

If you have not read the editorial outline of the plan in the September issue, you are urged to do so.

The addresses of the three libraries follow:

U. C. Medical Library, The Medical Center, 3rd and Parnassus, San Francisco, California.

Lane Medical Library, Clay and Webster Streets, San Francisco, California.

Los Angeles County Medical Library Association, 634 South Westlake, Los Angeles, California.

If more convenient, you can send journals to: C. M. A. Postgraduate Committee, Room 2008, Four Fifty Sutter, San Francisco, California.

### Procurement and Assignment Service

Recruitment of medical officers for both Army and Navy services was given added impetus late in August, when local draft boards were advised that no further deferment should be granted registrants because of the fact that they had applications for commissions pending. Although this order is not directly aimed at physicians and dentists, there has been some indication that the large number of men in these two professional groups who were making applications for commissions were indirectly responsible for the writing of the new regulation.

Here is what has been happening in far too many cases: a physician makes initial application for a commission in the Army or Navy medical corps. He completes the preliminary application blank, takes his physical examination and receives a clearance from Procure-

† Harold A. Fletcher, M. D., 490 Post Street, San Francisco, is the State chairman on Procurement and Assignment Service, with supervision of all counties north of the fourteen southern counties.

Associate California chairman for the fourteen southern counties is Edward M. Pallette, M. D., 1930 Wilshire Boulevard, Los Angeles.

Roster of county chairmen on Medical Preparedness appeared in CALIFORNIA AND WESTERN MEDICINE, August, 1940, on page 86.

U. S. Army Medical Corps Recruiting Boards are in charge of Major F. F. South, MC, at room 1231, 450 Sutter St., San Francisco (EXbrook 0450), and Major C. A. Darnell, 1930 Wilshire Boulevard, Los Angeles (FEderal 1953).

For roster of Procurement Service Committees of County Medical Societies, see July issue of CALIFORNIA AND WESTERN MEDICINE, on pages 93-94.

† For complete roster of officers, see advertising pages 2, 4, and 6.

ment and Assignment Service on his availability. Then he delays in completing his application for commission by not filing with the recruiting office the necessary documents to accompany his application. In this way he may truthfully say that he has an application for commission pending, while in fact he has done nothing more than to complete the preliminary steps for securing a commission.

One such case has been uncovered where the applicant failed for five months to complete his papers. Needless to say, when Procurement and Assignment Service found this situation there was little sympathy given the applicant.

Now the power of Procurement and Assignment Service to defer the induction of physicians because of pending applications for commissions has been withdrawn. Each physician is now on his own with his local draft board on this score. Procurement and Assignment Service has notified every physician on the "available" list of this change of procedure by the local draft boards; it will now be up to the men themselves to work out their own salvation with their local boards.

Aside from this new development, the recruiting program is proceeding on orderly lines. The Army is still seriously short of medical officers and can use all possible applications for commissions. The new draft board order is expected to produce a large volume of applications.

Procurement and Assignment Service is just now beginning to receive the data necessary to compile and put into operation a relocation file for the filling of vacancies in medical practice in industrial plants or in civilian communities. It is hoped that through this file there may be supplied enough physicians to protect medical resources in various communities and to make possible the medical care of large groups of industrial employees in key wartime industries. Any calls for, or offers of, assistance along this line will be gladly received by Dr. Harold A. Fletcher in San Francisco or Dr. Edward M. Pallette in Los Angeles.

### Third Medical Officers Recruiting Board Established in California

In order to expedite the procurement of California's quota of Physicians and Dentists for War Service, a third Medical Officers Recruiting Board has been established in California, with headquarters in the Medico-Dental Building, 1127 11th Street, Sacramento, California. Formerly there were only two recruiting boards, one in Los Angeles, and one in San Francisco.

The North Central Board with Headquarters in Sacramento will serve thirty counties, namely:

Alpine, Amador, Butte, Calusa, Calaveras, El Dorado, Fresno, Glenn, Lassen, Madera, Mariposa, Merced, Modoc, Nevada, Mono, Placer, Plumas, Sacramento, San Benito, San Joaquin, Shasta, Sierra, Siskiyou, Stanislaus, Sutter, Tehama, Trinity, Tuolumne, Yolo, Yuba.

This board is in charge of Lt. Colonel Carlton S. Allen, M. C., senior recruiting board officer of California. Inquiries may be addressed to Colonel Allen or to Captain Irving J. Taber, Adjutant and Summary Court Officer, Telephone 3-5415.

### Blood Donors Needed

Blood donors are needed at the rate of 50,000 per week for the next 12 months, Chairman Norman H. Davis, of the American Red Cross has announced. The Army and Navy have requested a new quota of 2,500,000 pints of blood within that period.

The blood collected by the Red Cross will be processed into dried plasma and serum albumin for emergency transfusions for the armed forces. The serum albumin is a recently developed blood substitute in which the Navy is especially interested because it requires less storage space than plasma.

The blood must reach a processing laboratory within 24 hours after it is drawn. For that reason, the Red Cross has had to limit donor centers to those regions near processing laboratories. Red Cross blood donor centers for the Army and Navy now exist in the following cities: New York, Philadelphia, Baltimore, Rochester, N. Y., Buffalo, Boston, Cincinnati, Cleveland, Chicago, Detroit, Pittsburgh, Indianapolis, St. Louis, Milwaukee, Los Angeles, San Francisco, and Washington, D. C.

Those who have already given blood can do so again. The average healthy man or woman can safely give blood for transfusions every three months, according to a recent report to the American Medical Association. The safe time is marked by the return to normal value of the hemoglobin, red coloring matter of the blood.—*Berkeley Gazette*, August 7.

### C.M.A. MEMBERS IN MILITARY SERVICE\*\*

#### Yuba-Sutter-Colusa County Medical Society

Members of the Yuba-Sutter-Colusa County Medical Society on Active Duty with the Army and Navy.

(Report, as of August 4, 1942. Total Number, 4.)

Name	Rank (if known)	Service (if known)
Delamere, Granville S.—Major.....		Army
Hamilton, Robert L.—Captain.....		Army
Miller, Benjamin F.—Captain.....		Army
Swift, Leon M.—Captain.....		Army

#### Los Angeles County Medical Association

Members of the Los Angeles County Medical Association on Active Duty with the Army and Navy.

(Although addresses are not listed, any member who wishes to communicate with any of his confreres may do so by directing the letter to the office of the Secretary of the Los Angeles County Medical Association, 1925 Wilshire Boulevard, Los Angeles.)

(Report, as of August 25, 1942. Total Number, 370.)

Name	Rank (if known)	Service (if known)
Allen, Carlton S.—Lt. Col.....		Army
Alsberge, E. Wallar—Captain.....		Army
Alsberge, Marden—1st Lieut.....		Army
Alward, H. Cedric.....		Army
Andersen, Geo. Carl.....		Navy
Anderson, C. Russell—Major.....		Army
Anderson, Forrest N.—Major.....		Army
Anderson, Frank M.—1st Lieut.....		Army
Anderson, Milford X.—Captain.....		Army
Anderson, Stanley B.—Major.....		Army
Arkush, Albert S.—Lt. Comdr.....		Navy
Arnold, Ferris—Major.....		Army
Arnold, Walter F.—Lieut.....		Navy
Auerbach, Oscar—1st Lieut.....		Army
Babcock, Donald T.—Major.....		Army
Balyeat, F. S.....		Navy
Barnes, Norman J.—Lieut.....		Army
Barnum, Glenn L.....		Navy
Barshop, Nathan—Captain.....		Army
Barton, Edw. Wm., Jr.—Lieut.....		Navy

\*\* County Society Secretaries are requested to submit the lists for their respective counties.

Bedri, Marcel—Captain.....	Army	Godard, Clarence H.—Captain.....	Army
Beerman, Herman M.—Captain.....	Army	Goldberg, Percy H.—Major.....	Army
Behrendt, R. A.—Lieut.....	Navy	Goldenberg, Julius L.—Captain.....	Army
Behrens, Herbert C.—Lieut.....	Army	Golenternek, Dan—Captain.....	Army
Bennett, Edwin S.—Major.....	Army	Goodcell, Ross A.—Lieut.....	Navy
Bennett, Louis C.—Major.....	Army	Goel, Elmer F.—Captain.....	Army
Bernstein, Theodore I.—Captain.....	Army	Gordon, Gerald—1st Lieut.....	Army
Billig, H. E., Jr.—Lieut.....	Navy	Gordon, Kenneth W.—1st Lieut.....	Army
Blackmun, Robert L.—Lieut.....	Army	Grant, Ben E.—Lt. Col.....	Army
Blatherwick, Norman—Lieut.....	Army	Grant, R. S.—Lieut.....	Army
Blood, Russell H.—Lt. Comdr.....	Navy	Greene, H. Harvey—Lieut.....	Navy
Bower, Albert G.—Lt. Comdr.....	Navy	Groskloss, H. H.—Lieut.....	Navy
Boyes, Joseph H.—Major.....	Army	Grossman, Carl M.—1st Lieut.....	Army
Bradford, Fred E.—Lieut.....	Navy	Gunther, Lewis—Lt. Comdr.....	Navy
Branch, C. H. H.—Lieut.....	Navy	Gurdin, Michael M.—Lieut.....	Navy
Brem, Thomas H.—Captain.....	Army	Hadley, R. C.—1st Lieut.....	Army
Briesen, Hans V.—Lt. Comdr.....	Navy	Hall, Colby—Captain.....	Army
Brown, Walter B.—Captain.....	Army	Hargrave, Frederic C., Jr.—Captain.....	Army
Brownsberger, Sidney—Captain.....	Army	Harmon, George A.....	Army
Bryant, Ben L.—Lt. Comdr.....	Navy	Harner, C. E.—Comdr.....	Navy
Buck, Leonard S.—1st Lieut.....	Army	Hauser, V. F.—Captain.....	Army
Budd, John W.—Lt. Comdr.....	Navy	Hawkins, Leland.....	Army
Budge, Edwin S., Jr.—Lieut., s.g.....	Navy	Hawley, Carl J.—1st Lieut.....	Army
Burger, Raymond A.—1st Lieut.....	Army	Henderson, Jesse L.—Lt. Comdr.....	Navy
Burke, George T.—Lieut.....	Navy	Hendricks, Coleman B.—Captain.....	Army
Burns, G. Creswell—Captain.....	Army	Henrichsen, Arthur L.—Captain.....	Army
Butler, Orville W.—Lt. Comdr.....	Navy	Henriksen, Erle—Major.....	Army
Butt, Edward M.—Lt. Comdr.....	Navy	Henstell, Henry H.—1st Lieut.....	Army
Cameron, Markley C.—Lt. Comdr.....	Navy	Hiatt, Nathan.....	Army
Campbell, Clayton C., Jr.—1st Lieut.....	Army	Hickey, N. Glenn—Captain.....	Army
Carter, Martin G.—Lt. Comdr.....	Navy	Higgins, John W.—1st Lieut.....	Army
Caruso, Tenero D.—Lieut.....	Navy	Hillyer, Ernest C.—Lt. Comdr.....	Navy
Castanares, S.—Major.....	Army	Hilty, Henry L.—1st Lieut.....	Army
Castlen, Charles R.—Lt. Col.....	Army	Hittleman, Joseph—1st Lieut.....	Army
Chapman, James L.—Lt. Comdr.....	Navy	Hodgdon, Frank—Major.....	Army
Chier, Reuben D.—1st Lieut.....	Army	Holt, C. Zeno—Colonel.....	Army
Churchill, Ambrose S.—Captain.....	Army	Homme, O. H.—Major.....	Army
Coggin, Charles B.—Captain.....	Army	Hope, Robert B.—Captain.....	Army
Cohn, Harold A.—Captain.....	Army	Hosmer, Fell.....	—
Collins, Donald C.—Major.....	Army	Houck, George H.—Major.....	Army
Costolow, Wm. E.—Comdr.....	Navy	Huenergardt, Alfred G.—Captain.....	Army
Cozen, Lewis N.—Major.....	Army	Huff, Louis Legros—Captain.....	Army
Crane, N. F.—Captain.....	Army	Hughes, S. E., Jr.—Lt. Comdr.....	Navy
Crockett, Herbert G.—Captain.....	Army	Hunt, Frederick T.—Lieut.....	Navy
Cummings, Harold—Lieut.....	Navy	Ilfeld, Frederick W.—1st Lieut.....	Army
Darnell, Clarence A.—Major.....	Army	Imler, H. G.—Captain.....	Army
Davis, Wm. Dewey.....	Army	Irish, C. W.....	Army
Dean, James Reeve—Lt. Col.....	Army	Irvine, Rodman—Captain.....	Army
DeLong, Everett W.—1st Lieut.....	Army	Jacob, Harry H.....	Army
Delphay, William E.—Lt. Comdr.....	Navy	Jacobs, Melville—Major.....	Army
Dickmann, Richard C.—1st Lieut.....	Army	Jacobus, Willis L., Jr.—Captain.....	Army
Dodd, A. M.—Major.....	Army	Jamison, H. W.—Captain.....	Army
Donohoe, E. C.—Major.....	Army	Jenney, E. Ross—Major.....	Army
Doroshov, George D.—Captain.....	Army	Johnson, Harvey—Captain.....	Army
Downey, Thomas P.—1st Lieut.....	Army	Johnson, James B.—Captain.....	Army
Dunbar, W. Vernon—Lt. Comdr.....	Navy	Jones, Archie A.....	Navy
Duncan, John J.—Captain.....	Army	Jones, F. Harriman.....	Army
Ebers, T. M.—Lieut.....	Navy	Jones, Glen Ellis—Captain.....	Army
Eckhardt, Wymond—Captain.....	Army	Josephs, Louis—Lt. Comdr.....	Navy
Eng, Samuel Yen—1st Lieut.....	Army	Judge, W. Donald—Major.....	Army
English, Glenn G.—Lieut.....	Navy	Kaller, M. B.—1st Lieut.....	Army
Ewing, John P.—Lieut.....	Navy	Kaplan, Harry E.—Lt. Comdr.....	Navy
Faier, Herman I.—Captain.....	Army	Kay, Raymond.....	—
Falconer, F. H.—Lt. Comdr.....	Navy	Keipp, James V.....	Army
Fish, Lester Warren—Major.....	Army	Kellogg, Frederick—Major.....	Army
Flynn, J. F., Jr.....	Navy	Keltz, Charles—1st Lieut.....	Army
Friedman, Lawrence J.—1st Lieut.....	Army	Kesling, Emmett F.—Captain.....	Army
Gallup, Charles A.—Lieut.....	Army	Keye, John D.—Lt. Comdr.....	Navy
Gazzaniga, D. A.....	Navy	Kibby, S. V.—Lt. Col.....	Army
Gendel, Samuel—1st Lieut.....	Army	Kiefer, Albert L.—1st Lieut.....	Army
Gernand, Henry C.—Lieut.....	Navy	King, Robert W.—Captain.....	Army
Gibson, Wm. R.—Captain.....	Army	King, Stuart D.—1st Lieut.....	Army
Globerson, Irwin—1st Lieut.....	Army	Kinyoun, F. H.—Major.....	Army

Kirchner, H. J.—Captain.....	Army	Paul, Olin—Captain.....	Army
Kiskadden, Wm. S.....	Army	Pattison, A. C.—Major.....	Army
Klausner, John T.—Captain.....	Army	Payne, Royal C.—Captain.....	Army
Klor, Samuel J.—1st Lieut.....	Army	Pentz, Clarence R.—Lt. Comdr.....	Navy
Krieger, Sherburne—Captain.....	Army	Person, Edward C.—Lieut.....	Navy
Landers, Clyde H.—Captain.....	Army	Peterfy, Richard A.....	Army
Larson, E. Eric—Lt. Comdr.....	Navy	Pierce, Wilmot F.....	—
Leake, William H.—Lt. Comdr.....	Navy	Pierose, Perry N.—1st Lieut.....	Army
Leavitt, Arthur S.—Captain.....	Army	Pohlman, David A.—Captain.....	Army
Leffingwell, F. E.—Captain.....	Army	Pohlman, Max Edward—Lieut.....	Navy
LeVan, Paul.....	Army	Popkin, Roy J.—Major.....	Army
Lewis, Charles H.—Captain.....	Army	Posner, Charles—Captain.....	Army
Lindsley, St. Claire R.—1st Lieut.....	Army	Potasz, Thomas M.—Captain.....	Army
Linne, Francis B.—Captain.....	Army	Powers, Edward S.—1st Lieut.....	Army
Lloyd, Allen S.—Lieut.....	Navy	Presnell, James F.—Major.....	Army
Lloyd, Oliver D.—Captain.....	Army	Pressman, Joel J.—Lieut.....	Navy
Lobel, Charles S.—1st Lieut.....	Army	Prigge, Edward K.—Major.....	Army
Lomas, Max I.—Captain.....	Army	Ray, Earl B.—Major.....	Army
Lovell, R. A.—Major.....	Army	Raney, A. A.—Captain.....	Army
Loy, Monroe F.—1st Lieut.....	Army	Reeder, Charles W.—Lt. Comdr.....	Navy
Lund, LeVal—Lt. Comdr.....	Navy	Redfern, Wendell M.—Captain.....	Army
Lynch, James M.—Lt. Comdr.....	Navy	Reeves, David Lander—Major.....	Army
MacKinnon, Douglas D.—Lt. Comdr.....	Navy	Reinertsen, B. R.—Lt. Comdr.....	Navy
MacMillan, Douglas W.....	Army	Reynolds, Fred'k. G.—Captain.....	Army
Magnuson, Harold J.....	Navy	Rhind, Ralph—Lieut.....	Navy
Malis, Sol.—Major.....	Army	Richardson, Gordon L.—Captain.....	Army
Mandel, Charles—Captain.....	Army	Riddell, Herman I.—Lieut.....	Army
Maner, Geo. D.—Lt. Comdr.....	Navy	Riskind, Lester A.—Lieut.....	Navy
Manning, John G.—Major.....	Army	Roberts, Gilbert J.—Lt. Comdr.....	Navy
Mapes, Russell W.—Major.....	Army	Roberts, John F.—Major.....	Army
Marco, Joseph.....	Army	Roehm, E. A.....	Army
Marians, Abraham—1st Lieut.....	Army	Roen, Paul B.—Lt. Comdr.....	Navy
Mark, Bernard J.....	Army	Rogers, Maurice B.—Captain.....	Army
Marshall, James M.—Lt. Comdr.....	Navy	Rogers, Thomas J.—1st Lieut.....	Army
Martin, Harry W.....	Army	Rose, Sidney J.—1st Lieut.....	Army
Mason, J. I.—Captain.....	Army	Rosenberg, I. G.—Lieut.....	Navy
McCune, Scott S.—Major.....	Army	Rosenthal, A. M.—Lt. Comdr.....	Navy
McCuskey, Charles F.—Major.....	Army	Rosoff, Leonard—Captain.....	Army
McElhinney, P. P. B.—Lt. Comdr.....	Navy	Rosove, Leon—Lieut.....	Navy
McEvers, Albert E.—Colonel.....	Army	Ross, Rex L.—Lieut.....	Navy
McGowan, Donald O.—Captain.....	Army	Rosser, Bernard H.—1st Lieut.....	Army
McKeever, Francis.....	Army	Rothman, Phillip E.—Lt. Comdr.....	Navy
McKenna, Stephen E.—1st Lieut.....	Army	Rubenstein, Victor G.—Captain.....	Army
McKibbin, John—Captain.....	Army	Ruddock, John C.—Comdr.....	Navy
McMaster, Paul E.—Lt. Comdr.....	Navy	Ryan, Clark D.—Lt. Comdr.....	Navy
Melhorn, Kent C.....	Navy	Sacasa, Carlos F.—Captain.....	Army
Miller, Alden H.—Lieut.....	Navy	Salomon, Werner—1st Lieut.....	Army
Miller, C. Duane—Lt. Comdr.....	Navy	Sands, Robert L.—Major.....	Army
Miller, David—1st Lieut.....	Army	Saverien, Arnold E.—Comdr.....	Navy
Mitchell, William J.—Captain.....	Army	Saylin, Joseph—Colonel.....	Army
Mitchelson, Delmar S.—Captain.....	Army	Schade, Frank F.—Major.....	Army
Mooney, H. S.....	Army	Schenk, Harry Leon—Major.....	Army
Moore Oliver M.—Captain.....	Army	Schild, Emmett L.—Major.....	Army
Moore, Robert L.—Major.....	Army	Schmidt, Allen R.—Captain.....	Army
Moran, Frank A.—Captain.....	Army	Schmidt, Philipp E.—Major.....	Army
Mortensen, Wm. L.....	—	Schmoele, John M.—Comdr.....	Navy
Motchan, Louis A.....	Army	Scholtz, Julius R.—Major.....	Army
Mourer, Lyle A.—Captain.....	Army	Schroeder, Ralph L.—Captain.....	Army
Mozar, Harold—1st Lieut.....	Army	Schwartz, J. L.—Comdr.....	Navy
Mulligan, Harold R.—Lt. Comdr.....	Navy	Seitter, Paul F.....	Navy
Murray, Saunders—Captain.....	Army	Shachtman, Joseph M.—Captain.....	Army
Nador, George—1st Lieut.....	Army	Shackford, Bartlett C.—Lt. Comdr.....	Navy
Nasatir, A. Victor—Captain.....	Army	Shelton, Robert M.—1st Lieut.....	Army
Nees, Oliver R.—Comdr.....	Navy	Shear, Sidney P.—1st Lieut.....	Army
Nesburn, Henry R.....	Navy	Shuman, John Wm., Jr.—1st Lieut.....	Army
Nisbet, Thomas W.—Major.....	Army	Shuman, John Wm., Sr.—Lt. Col.....	Army
Nixon, Norman—Major.....	Army	Sicherman, Karl L.—Major.....	Army
Norwood, Jackson.....	Navy	Silver, Bernard—Lieut.....	Navy
Pahl, Blythe W.—Lieut.....	Navy	Simon, Julius—Lieut.....	Navy
Paine, Norman C.—Lt. Comdr.....	Navy	Simonds, Robert—Captain.....	Army
Palette, Edw. C.—Major.....	Army	Slaughter, Howard C.—Lt. Col.....	Army



Sloan, Ralph V.—1st Lieut.....	Army
Smallwood, W. C.....	Navy
Smedley, Robert C.....	Navy
Smith, Harold D.....	Army
Smith, Roy D.—Lieut.....	Navy
Snyder, Wm. H., Jr.—Captain.....	Army
Soll, Sydney N.—1st Lieut.....	Army
Sorenson, Edward J.—1st Lieut.....	Army
Southgate, Paul.....	Navy
Spalding, W. Cullen—Major.....	Army
Sperling, Samuel J.—Captain.....	Army
Stanton, E. H.....	Army
Staub, John G., Jr.....	Army
Steckel, Morris Leo—Captain.....	Army
Steele, Edson H.....	Navy
Stehly, Charles C.—1st Lieut.....	Army
Stern, Robert Leo—1st Lieut.....	Army
Stevens, Joseph B.—Lt. Comdr.....	Navy
Stewart, Charles M.—Captain.....	Army
Stilwell, Leland E.—Major.....	Army
Stocker, Howard O.—1st Lieut.....	Army
Stout, Gurn—Lt. Comdr.....	Navy
Sullivan, Daniel F., Jr.—Lieut.....	Navy
Syman, Leo W.—Captain.....	Army
Szukalski, Joseph P.—Major.....	Army
Taber, Kenneth W.—Captain.....	Army
Taylor, Charles M.—Captain.....	Army
Thorner, M. C.—1st Lieut.....	Army
Tidd, Charles W.....	Navy
Toma, John J.—1st Lieut.....	Army
Townsend, Kenneth.....	Army
Turner, Ewing L.—Captain.....	Army
Tyroler, Frederic N.—Lieut.....	Navy
Tysdale, Richard V.—Lieut.....	Army
Vaughn, John.....	Navy
Vidgoff, I. Jack—Captain.....	Army
Walker, J. E.—Lt. Comdr.....	Navy
Waller, Lorenz M.—Major.....	Army
Ward, Henry Charles—1st Lieut.....	Army
Ware, E. Richmond—Lt. Col.....	Army
Watson, L. C.—Lieut.....	Army
Weber, Henry M.—Comdr.....	Navy
Webster, Geo. E.....	Army
Weinberg, Samuel J.—Captain.....	Army
Weinberg, Sydney L.—Major.....	Army
Westerhout, F. C.—Captain.....	Army
Wexler, Manuel R.—Captain.....	Army
White, Carroll W.—1st Lieut.....	Army
Whitlow, Joseph Edwin—Major.....	Army
Whittaker, Thomas W.—Captain.....	Army
Wilkinson, Allan B.....	Army
Wilson, Clinton—Major.....	Army
Wilson, Warren A.—1st Lieut.....	Army
Wineland, A. J.....	Navy
Wirth, Robert G.—1st Lieut.....	Army
Wolfson, Samuel A.—1st Lieut.....	Army
Wright, John.....	Navy
Wvers, Robert E.....	Army
Zide, Harry Arthur—Captain.....	Army
Zombro, Frederick B.—Captain.....	Army

#### Dr. Morton R. Gibbons Tells OCD Rules

Emergency medical services in San Mateo County civilian defense today faced the necessity of reorganization of personnel and procedure to conform to Office of Civilian Defense regulations, laid down Tuesday night in Burlingame by Dr. Morton R. Gibbons, deputy state chief of emergency medical service.

Addressing assembled local emergency medical chiefs and their deputies at county civil defense headquarters, Dr. Gibbons pointed out that the national plan calls for dispatching doctors to the scene of incidents as soon as

possible. Heretofore first aid and ambulance teams have been dispatched by control centers to bring casualties to doctors at hospitals or casualty stations.

#### Hospital Dispatching

Dr. Gibbons recommended that squads of doctors and nurses be organized and dispatched from hospitals.

"Doctors must take charge," he emphasized, citing heavy fatalities in England and Spain resulting from lack of professional aid at the scene of casualties, or in casualty stations where inadequate equipment and personnel made adequate examination and treatment impossible.

First aid teams as such, except in factories, will henceforth be known as "stretcher bearers" to conform to OCD terminology.

Casualty stations will not be manned until after an incident has occurred.

#### Control Room Dispatcher

Emergency medical service chiefs, sitting at the control centers, will dispatch squads from hospitals. Squads comprise from two to four doctors, nurses, auxiliaries, equipped to man a casualty station or to set up a first aid post at the scene of an incident.

Ambulances will be dispatched by the transportation officer or Red Cross officer on the control board, as the case may be.

These and other details were explained to the emergency medical service director. . . . —Redwood City Gazette, August 7.

#### Los Angeles Civilian Defense Facilities

Los Angeles, July 29.—(AP.)—California steel mills and foundries may have to close down unless the public can provide 100,000 tons of scrap metal every month.

James Mussatti, general manager of the California State Chamber of Commerce, gave that information on the war metals crisis to the state council of defense at its conference yesterday.

#### Facilities Ready

Major Charles F. Sebastian of the United States Public Health Service told the conference that in the event of air raids Southern California's 4,000,000 population will be served by an available 17,107 regular hospital beds, 6,357 extra beds and 4,891 cots, 8,396 stretchers, 2,228 physicians, 4,454 graduate nurses, 332 commercial ambulances, 1,287 volunteer and fully equipped ambulances, and 1,320 additional emergency medical vehicles.

He said there are 446 casualty stations.—Sacramento Bee, July 29.

#### Army and Navy Will Need Thousands of Medical Men

A wartime census of its members by the American Medical Association reveals that the United States today has more than 176,000 physicians, an increase of 64,000 since 1930. Of this number, approximately 81,000 are under 45 years of age. Fully two-thirds of these, under present Army and Navy plans, will be called into the armed services to build up understaffed medical corps. Since the country is going to find itself in the near future without the services of some 50,000 to 60,000 physicians now engaged in civilian practice, the public will have to take upon itself some of the duties of safeguarding the nation's health. A nation of healthy workers is a priceless asset at any time, but never more so than in a war period. . . .

Of the 152,923 physicians in private practice in the United States in July, 1942, there were 37,753 under 35 years of age.—Martinez Gazette, July 31.

### Medical Schools Setting Record

Chicago, Aug. 13.—(AP.)—The American Medical Association estimated today that approved medical schools, operating under wartime accelerated programs, will graduate a record total of 21,029 students during the next three years.

The number is "5,082 more than would have graduated without the adoption of the accelerated programs," the A.M.A. Council on Medical Education and Hospitals reported.

"Never before in the history of this country have as many as 21,000 physicians been graduated from its medical colleges within a three-year period."

The A.M.A. Journal, estimating that 3,460 physicians died in the United States during 1941, said the 21,029 graduates would provide more than two new physicians for every death.—Los Angeles *Examiner*, August 14.

### A War to Save Lives

Rear Admiral Ross T. McIntire, personal physician to the President and Surgeon General of the U. S. Navy, arrived in San Francisco yesterday on an inspection tour of Pacific Coast naval medical installations.

The Navy, he said, is waging a war at home in its medical laboratories—a war against the limits of medical science in order to keep its seagoing Samaritans "at least one jump ahead of the game."

"We've got to keep ahead of our problems in the field," he declared.

This involves endless laboratory research, the evolution of new medical techniques and the quick transmission of new knowledge gained to the field of operations.

While doctors aboard America's fighting ships are saving lives, naval doctors at home are exploring the qualities and uses of sulfa drugs, blood substitutes, treatment of chest wounds, abdominal wounds, means of increasing pilots' stamina and a myriad of other life saving elements.

### Fatality Decline

"Wounds of a chest and abdominal character which were extremely serious during the first World War today result in less than 10 per cent fatality, due to medical advancement," the admiral said.

The Navy consistently is finding new uses for the sulfa drugs, Admiral McIntire said, and also is finding "ways and means" of increasing the stamina of its air pilots.

Every naval unit numbering 150 men or more has its medical officer, he reported. Certain types of units whose operation involve a higher than average degree of danger, are assigned additional medical personnel.

"If a man is wounded in action today, even if he is wounded seriously, he has every chance to live."

The Navy's great floating hospitals today are "scattered all over the world." All have been doing yeoman service when called upon.

While here Admiral McIntire will inspect the Mare Island, Treasure Island and Oak Knoll hospitals. "You have here, in your own midst, at Oak Knoll, several wounded men who received their injuries at Midway," he declared.

Chief problem facing Navy medical officers today is the transportation of medical supplies across the continent and into the Pacific theater "so that they will be at their destination before they are needed," Admiral McIntire said. "This problem is being solved," he added.

Syphilis constitutes a minor problem to Naval medics, the Admiral declared, only 5.2 per thousand men being affected. "We have reduced the Naval syphilis rate 7 per cent from its fiscal 1941 figure," he said.

Today's Naval syphilis rate is the lowest it has been

in the last 40 years, according to a recent review of medical records, he reported.

President Roosevelt's health is "better than it has been during the past three years," the Admiral said.—San Francisco *Chronicle*, August 21.

### Suggestions to the Public. By the National Committee on Participation of Medical Profession in the War Effort

The War Participation Committee of the American Medical Association (including Drs. Walter F. Donaldson, Pittsburgh, Chairman; Edward R. Cunneiffe, New York; Clyde L. Cummer, Cleveland; John H. O'Shea, Spokane, Wash., and William R. Molony, Sr., Los Angeles, and as ex officio members the President, the President-Elect, the Chairman of the Board of Trustees, the Secretary and the Editor of the Journal of the American Medical Association), has given consideration to the problem of the supply of physicians for the armed forces, for industry, and for the need of our civilian communities.

While there does not seem to be an immediate shortage of physicians for the nation as a whole, the voluntary departure of some physicians from certain areas has created in those areas a special problem. With the armed forces rapidly expanding, the number of areas in which the available physicians will be at a minimum is likely to increase.

In order to aid the best and most efficient possible utilization of available medical services, the War Participation Committee of the American Medical Association makes the following suggestions:

1. Call the doctor to your home only when necessary. Go to his office when you can.
2. Help the doctor to plan proper use of his time by calling him before nine o'clock in the morning whenever possible.
3. Have an examination at the first sign of sickness. This helps to prevent long and serious illnesses.
4. Some conditions are best treated in the hospital. Doctors can see more patients in the hospital in the same amount of time than elsewhere. Coöperate by providing in advance against the cost of hospitalization. Go to the hospital when the doctor recommends it.
5. Have yourself immunized against smallpox and lockjaw. Make certain that all children are vaccinated against smallpox and diphtheria. When outbreaks of diphtheria or other infections threaten, coöperate with health officers and doctors in prevention.
6. Avoid overeating, overdrinking, overworking and overexercising. Get a good diet. Follow the rules of personal hygiene.
7. Women should take first aid courses and nurse's aid training courses of the Red Cross. This will help to relieve the burden on the physician and nurses in the hospital and in the home.
8. Every doctor not already in the armed forces is probably doing extra work in industry, public health and in his private practice. Help him to conserve his health by avoiding any unnecessary responsibilities for him.

### Military Clippings—Some news items of a military nature from the daily press follow:

#### War Requires Blood

There is no patriotic San Franciscan who would not gladly shed his blood on the field of battle if he might thereby enhance his country's prospects of victory.

And so there should be none who will fail to heed the appeal for blood donations that will be made throughout this week by the city's three blood procuring agencies—the Red Cross Blood Procurement Center, the Irwin

Memorial Blood Bank and the San Francisco Hospital Blood Bank.

For blood so given is as direct and valuable a contribution to the war as that spilled in the conflict.

In one sense it is more valuable. For we at home give our blood for the constructive purpose of restoring our wounded fighters to health and life.

Blood gathered by the agencies will be used, for the most part, in the making of plasma which will be sent to our military hospitals and ships all over the world, to be used in lifegiving transfusions for our wounded.

Certainly no finer nor more patriotic contribution to the war effort is conceivable. And surely no thrill could be greater than the knowledge that some son has been restored to his mother, or some husband to his wife, because our blood has healed him and restored his strength.

The development of the plasma technique, which enables our doctors to save many boys who surely would have died in earlier wars, is one of the few scientific achievements operating to relieve the stark horror of this conflict.

There should be, there MUST be, a great response to this vital appeal throughout this "Blood Donor Week." As more and more boys fall in battle, the need for plasma grows, and it will continue to grow until the war is won. So let every healthy person call GRaystone 9373 and make an appointment for a blood donation.—San Francisco *Call-Bulletin*, July 27.

#### Blood Donor Week

A stream of blood and blood plasma to flow from San Francisco to the far-flung battlefields where American boys are shedding their own blood for preservation of the nation is the objective of this Blood Donor Week.

People of this city, living amidst peaceful surroundings, are asked to donate their blood to replace the blood our soldiers, sailors and marines are losing in conflict.

Those who have not yet made this life-giving contribution are urged to visit one of the blood banks during the week, and those who previously have generously shared their blood with the country's defenders are asked to give again.

The blood banks are the Red Cross Blood Procurement Center, 2415 Jones St., the Irwin Memorial Blood Bank, and the San Francisco Hospital Blood Bank. The first two send blood and plasma to foreign fields, the latter supplies the local hospitals.

No hardship or physical injury is suffered by donors. It is, indeed, not an unpleasant experience. Compared with the sacrifice our armed forces are making it should be considered a high privilege.—San Francisco *News*, July 29.

#### Vaccine Use Given Support

Chicago, July 28.—(UP).—The Journal of the American Medical Association said in an editorial today that the development of jaundice among army personnel apparently from the use of vaccine against yellow fever was far less serious than an epidemic of the fever would be among soldiers fighting in tropical areas.

"There is every reason to believe that vaccination against yellow fever is warranted," the editorial said, "and that the occurrence of 62 deaths and some 28,000 cases of jaundice associated with the vaccination of millions of men is far less serious than would be an epidemic of virulent yellow fever among soldiers sent to the tropical areas in which our army is now engaging the enemy."

The editorial said the vaccine had been tested in "hundreds of thousands of cases" and had been adequate.—Oakland *Post-Enquirer*, July 28.

#### Dental Students Enroll for Armed Services

San Francisco, Aug. 25.—Practically the entire student body at the University of California College of Dentistry has now enlisted in the Reserve Corps of the Army and Navy, Dean Willard C. Fleming announced today.

The total enrollment at the College is now 200, said Dean Fleming. The students who have enlisted will remain on inactive service until graduation when they will be called to active duty. Special instruction is being given the enlisted students to prepare them for duty in the Army and Navy. . . .—U. C. *Bulletin*.

#### British Limits M. D. Supplies New Rations to Go Into Effect

British physicians and nurses are restricted to a maximum of three pairs of rubber gloves apiece at a time, under the new rationing policy of the British Ministry of Health. The Japanese occupation of Malaya has also

made it necessary to restrict rubber supplies to hospitals and clinics, according to a report from London published in the *Journal of the American Medical Association*.

Medical use of alcohol is also restricted. The Minister of Health has issued an alternative list of spirits and tinctures to be used, which have substantially the same effect although they contain less alcohol.—San Francisco *News*, August 7.

#### Deferments Withdrawn

Sacramento, Aug. 25.—(INS).—Withdrawal of men originally deferred for occupational reasons was ordered today by Lieutenant Colonel K. H. Leitch, state director of selective service.

He declared these men originally were "loaned" to industry but that now they were needed to meet the increasingly heavy demands of the armed forces.

Occupational deferments to men engaged in agriculture and other seasonal work where replacements are not available will not be disturbed at this time.

#### Up to Boards

Leitch told boards to deny applications for occupational deferments in cases where only a short replacement training period is required and where the registrant does not have a background of the kind of work in which he is engaged or related work.

In considering applications for extensions of occupational deferments the boards were told not to grant an extension unless the employer convinces the board that a reasonable but unsuccessful effort has been made to secure and train a replacement.

The boards were directed not to release class 1-B registrants for the purpose of enlisting. This rule was laid down to prevent necessary employes from leaving war and essential industries en masse, crippling production.

#### Aid War Work

The withdrawal of these registrants will be effected in an orderly manner.

Leitch said in the past selective service has protected vital industries and that so far as possible this will be done in the future.

#### Married Men in 3-A Class Face Call by Christmas Hershey Indicates Draft for Navy Planned

Chicago, Aug. 21.—(INS).—Married men now classed in 3-A will face a draft call by Christmas, Maj. Gen. Lewis B. Hershey, national director of Selective Service, warned today.

General Hershey added that men with wives and children, would be the last to be called, and that drafting of men for the Navy, Marine Corps and the Coast Guard is "coming into the picture."

The general, addressing the National Institute for Commercial and Trade Association executives at Northwestern University, added that "this drafting of men for the other services has not been arranged as yet, but is in the offing."

"Industry will have to begin immediately the giving up of men who are suitable for the armed forces," the general said, continuing:

"Vital war industries have been notified they too must give up skilled men if they come under the classification of married men with wives only and unmarried men with one dependent, such as mother or sister. Their places must be filled with older men, the physically unfit for service, or women."

General Hershey said draft boards have begun the reclassification of deferred men because they are skilled workers in war plants.

"The drafting of married men will take place in late October or early November, certainly by Christmas," the draft chief declared.

#### Near End of Rope

"Even one-armed or one-legged men will have to run machines in factories, if necessary, as we fill out the Army with able-bodied men now in plants."

"Draft boards now are sorting 3-A men to get 1-A men to fill quotas, and the boards are pretty near the end of the rope."

General Hershey reaffirmed the order in which 3-A men will be drafted:

- 1.—Single men with secondary dependents, such as aged or crippled relatives;
- 2.—Married men whose wives are employed;
- 3.—Men with dependent wives only;
- 4.—Men with dependent wives and children.—San Francisco *Examiner*, August 21.

## COMMITTEE ON PUBLIC POLICY AND LEGISLATION†

### Basic Science Act—Proposition No. 3

Now is the time for all members of the medical profession to start campaigning for the passage of the Basic Science Act, Proposition No. 3 on the state ballot for November 3. Only about six weeks remain before Proposition No. 3 comes before the voters of California; every member of the profession must do all in his power in that time to gain a "YES" vote for the Basic Science Act.

Our biggest opponent at this time is public apathy. Voters are more interested in the war and its effects upon themselves and their friends and families than they are in political measures. The only way to fight this opponent is to talk to your friends, patients, acquaintances, and urge them to vote "YES" on No. 3. Talk about No. 3 on every occasion. Identify yourself and your profession with it.

There is no need of going into long discussions with people on the merits of the Basic Science Act. Merely explain to your friends that it is an educational measure to raise standards. Its educational nature is attested to by the fact that the official arguments in favor of No. 3, which will accompany the Voters' Manual mailed to all electors by the Secretary of State, are signed by three of the leading educators in California. The signers of these arguments are Dr. Ray Lyman Wilbur, Chancellor of Stanford University; Rufus B. von Klein Smid, President of the University of Southern California, and Tully C. Knoles, President of the College of the Pacific.

The Basic Science Act does not put any present practitioners of any of the healing-arts out of business. It does not limit the patient's choice of the healer or type of healer he selects. It merely guarantees to the patient that future licentiates in any of the healing-arts shall first obtain an elementary training in the basic sciences which underlie the healing-art. The examinations to test this knowledge are to be given by a non-sectarian board of examiners to applicants who shall be known to the examiners only by number. Every safeguard has been arranged to provide an impartial, completely fair, examination. The act will add nothing to the taxpayer's burden; the Basic Science Examining Board will be completely self-supporting.

Proposition No. 3 will not "legislate anyone out of existence," as some of its professed opponents are likely to claim. Its one effect will be to make better physicians, better dentists, better osteopaths and better chiropractors.

Here are a few suggestions for each physician who wants to help in this campaign:

1. Enclose the small slips already sent you by the Public Health League of California in all mailings from your office.
2. Place these slips (and the small folders which you will soon receive) within reach of your patients in your waiting room.
3. Speak favorably on Proposition No. 3 on every occasion possible—in your home, in homes of friends, at service club meetings, lodge or club meetings, in street conversations, in your office, etc. Urge a "YES" vote.
4. Notify the Public Health League of California (244 Kearny St., San Francisco, or Chamber of Commerce Building, Los Angeles) of any openings you can

discover for a speaker before groups.

5. Notify the Public Health League or the secretary of your county medical society of your availability as a speaker. Full instructions will be furnished you.

6. Ask for the endorsement of all groups for Proposition No. 3. These endorsements are particularly valuable and obtainable if you get in and ask for them.

Remember, Proposition No. 3 is a non-partisan educational measure. Its success at the polls in November will rest largely with the members of the medical and allied professions and the amount of work they will do to promote it. There is no large amount of money available for advertising and other forms of campaign propaganda. There is only the collective effort of professional men and their friends. THAT'S WHERE YOU COME IN.

### Affirmative Argument on Proposition No. 3: Basic Science Initiative

The object of proposition No. 3, the Basic Science Initiative, is to provide a means of insuring that all candidates seeking the right to care for sick and injured people in California shall first possess a reasonable knowledge of the sciences fundamental to the healing-art.

When Proposition No. 3 becomes law, all applicants for a license to practice the healing-art must first pass examinations in five basic sciences—Anatomy, Physiology, Biochemistry, Bacteriology and Pathology. This examination is for the purpose of making a reasonable test as to whether the person so examined has some knowledge of the elementary principles of the basic sciences, which underlie the healing-art.

The Basic Science examinations will be conducted by educators. The Board of Examiners will consist of five persons appointed by the Governor. All appointees shall be selected because of their knowledge of the Basic Sciences. Each appointee shall be and remain an associate professor or full professor in one or more of the Basic Sciences at a university or college in this state, of equal or higher rank than a state college, or an active full time member of the faculty in one or more of the Basic Sciences in a state college.

Only one member of the Board may be appointed from any one university, state college or other institution.

NO MEMBER OF THE BOARD SHALL BE ACTIVELY ENGAGED IN THE PRACTICE OF THE HEALING-ART OR ANY BRANCH THEREOF.

The Board of Examiners in the Basic Sciences will be self-sustaining. There will be no cost to the taxpayers of California.

Present practitioners holding medical, dental, osteopathic or chiropractic licenses are exempt from the provisions of Proposition No. 3. Other exemptions include pharmacists, nurses, dental hygienists, optometrists, barbers, cosmetologists. Persons who treat the sick by prayer in practicing the religion of any well-recognized religious sect or organization are specifically exempt.

Sixteen states and the District of Columbia now have Basic Science Acts, to insure their sick and injured citizens of treatment by healers who have an elementary knowledge of the fundamental sciences relating to the human body. California is the only Pacific coast state that does not now have a Basic Science Act.

We wish particularly to emphasize the fact that the Basic Science Act will in no way affect the systems of healing now legally recognized in California. None of the rights or privileges of persons now legally engaged in practice will be disturbed. The people of California will continue to be free to select any legally licensed healer or system of healing. They will have the assurance, however, that the State of California guarantees that future licensees of the healing-arts have an elemen-

† Component County Societies and California Medical Association members should not give endorsements to proposed legislation unless the California Medical Association Committee on Public Policy and Legislation has so requested. On such matters, address: California Medical Association Committee on Legislation, Dwight Murray, M. D., Chairman, 450 Sutter, San Francisco. Telephone, DOuglas 0062.



tary knowledge of anatomy, physiology, biochemistry, bacteriology and pathology. Every voter should want this protection for himself and his loved ones in case of illness or injury.

Vote "YES" on Proposition No. 3 and raise California's basic educational requirements in the healing-arts to the level of other progressive states.

(Signed)

DR. RAY LYMAN WILBUR,  
*Chancellor, Stanford University.*  
DR. RUFUS B. VON KLEINSMID,  
*President, University of Southern California.*  
DR. TULLY C. KNOLES,  
*President, College of the Pacific.*

### Eighteen Measures on November Ballot

There will be 18 propositions on which will if passed involve changes the ballot at the November election in the state government, including complete reorganization of legislative and budget methods, establishment of a new authority to regulate practitioners of material healing systems, setting up of a new Forestry board, and controversial labor legislation.

Fourteen of the propositions are proposed amendments to the State Constitution which have passed the legislature. Two measures are the outcome of full initiatives. One is an initiative which was routed through the legislature with only half the number of signatures normally required. One proposition is on the ballot by referendum.

*Proposition 3, establishing a "basic science board" of five members to regulate and control members of material systems of healing in an initiative measure sponsored by the California Medical Association, the California State Dental Association, the Southern California State Dental Association, and the Public Health League of California.*

Representing 10 years' exploratory work by the organized physicians, surgeons, and dentists of the state, Proposition 3 is intended to set a minimum standard of training for any applicant whose profession calls for diagnosing, adjusting, palliating, correcting, operating, or prescribing for anyone claiming any sort of disease.

Members of any well-recognized religion who treat the sick by prayers are exempted from the requirements of the "basic science" proposal because they do not diagnose sickness nor prescribe physical correctives. Adherents of Christian Science are included in this group.

One of the most important measures on the ballot is Proposition No. 2, which provides for annual meetings of the State Legislature and annual budgets by state departments. If passed, this measure will do away with California's biennial system of legislative government and budgets. . . .

Most controversial issue on the ballot is Proposition No. 1, a referendum, to prohibit secondary boycotts or "hot cargo" by labor unions. . . .

An initiative measure to repeal the state income tax, Proposition No. 4, reaches the voters after they have been informed that for the first time in many years the state government is out of debt and has a surplus. . . .

Proposition 5, an enactment of the legislature, provides \$200 a month salaries for legislators. This doubles the amount legislators now earn. Under the present system, a legislator is paid \$12 a day. If the session meets 100 days, he earns \$1200. If it meets more than 100 days, he is only paid for 100. If it meets less than 100 days, he is paid only for the time served. In years the legis-

lature is not in session, a member is paid \$100 a month. This amounts to a maximum of \$2400 in two years.

Other propositions on the November ballot follow:

Proposition 6 sets up State Board of Forestry with seven members named by the governor with consent of senate; provides civil service exemption for State Forester.

Proposition 7 provides a procedure to tax insurance companies and has the support and endorsement of the companies.

Proposition 8 restricts use of fish and game funds to expenditures for fish and game conservation and enforcement.

Proposition 9 empowers legislature to diminish or increase salaries of the Superintendent of Public Instruction, State Treasurer, State Controller, and Secretary of State. At present the legislature has power to diminish these salaries but not to increase them.

Proposition 10 (an initiative measure by way of the legislature requiring only half the usual initiative signatures) provides for reorganizing building and loan associations.

Proposition 11 enables legislature to amend Boxing and Wrestling Initiative Act; permits championship boxing bouts of 15 instead of 12 rounds as at present.

Proposition 12 enables school districts, fifth and sixth-class cities, to hold stock in mutual water companies. This will permit small districts to obtain water on the same basis as large municipalities.

Proposition 13 provides additional Board of Equalization seat, eliminating controller.

Proposition 14 sets interest rate on court judgments at 5 per cent a year; interest rate on loan or forbearance of money, goods, or things in action, or accounts after demand, at 7 per cent a year, but permits parties involved to contract in writing on the interest rate which must not exceed 10 per cent.

Proposition 15 provides for transferring cases between State Supreme Court and District Courts of Appeal.

Proposition 16 establishes procedure for judicial review of decisions by administrative officers.

Proposition 17 makes State Treasurer trustee of certain money.

Proposition 18 makes State Controller a member of the State Reapportionment Commission in place of a surveyor general whose position was abolished some time ago. This commission goes into action only if the state legislature fails to move on reapportionment.—Victorville *News-Herald*, July 31.

## COMMITTEE ON MEDICAL ECONOMICS

(COPY)

Statement of the  
California Medical Association  
for the  
Office Wage Board  
of the

Division of Industrial Welfare, State of California\*  
The California Medical Association, a voluntary mem-

\*This statement by the California Medical Association has been prepared on the basis of sample surveys and of general knowledge possessed by the officers of the Association through knowledge of conditions prevalent in the 7,000 professional offices of its members throughout the State of California. The figures on out-patient visits in ten California hospitals have been secured from the August 15, 1942, issue (Educational Number) of the *Journal of the American Medical Association*. (See also, on pages 209 and 223.)

bership organization numbering close to 7,000 licensed doctors of medicine domiciled in California, wishes to present to the Office Wage Board a few pertinent facts affecting the medical profession for consideration in the adoption of any wage and hour order the Board may see fit to make.

#### 1. Number of Employees:

It is estimated that there are 10,000 licensed, practicing doctors of medicine in California and that these employ approximately 15,000 female employees. The employees are trained either as secretarial workers or as nurses, physiotherapists, technicians or other assistants to the doctor of medicine in his professional work.

#### 2. Existing Hours and Wages:

At the present time the office employees of doctors of medicine throughout California are employed for hours considerably shorter and wages considerably higher than the existing standards adopted by the Division of Industrial Welfare. There may be a few exceptions to this general rule, as follows:

(a) Employees of clinical pathological offices may be called upon to work additional hours in some instances where procedures in process cannot be interrupted. (Development of cultures, etc.)

(b) Employees of doctors of medicine in general or specialized practice may be called upon for extra hours where the health of the community may require the doctor to put in extra office hours or where gratis physical examinations made by the doctor on Selective Service registrants require him to maintain extra office hours. This extra-hour work of M. D.'s and their office nurses is bound to increase for the duration of the war because of the transfer to the armed forces of many doctors and nurses. Training of new nurses and technicians is not possible in time to alleviate the problem.

(c) Employees may be called upon to work extra hours in the event of epidemics or other community health needs of critical nature, where the doctor is called upon for additional time in his regular office hours. This situation may now be approaching a critical stage because of the number of doctors of medicine who have been called into the armed forces.

#### 3. Nature of Employment in Medical Offices:

Female employees in the large majority of offices of doctors of medicine report for work at about 10 a.m., have one hour for lunch and work until about 6 p.m.; on Saturdays, many such employees are not required to perform any work and in those cases where they do work on Saturdays they are generally employed for only a three-hour or four-hour period.

In most medical offices there are few employees; the doctor of medicine generally employs only one assistant, who handles his clerical and bookkeeping work, acts as receptionist and office assistant and does such general duties as may be required. In larger medical offices, where two or more doctors employ office employees in common, there may be an additional office nurse, or a laboratory technician, or a bookkeeper, or one or more of each class of employee. It is reliably estimated that the doctor of medicine employs an average of one and one-half office assistants of all kinds.

The duties of female office employees in medical offices are regulated by the demands of patients on the time of the doctor. In times of epidemics, during winter months when respiratory diseases run at a high rate, and at all times when unusual demands are made on the doctor's time, it may be necessary to require additional working hours of the office assistants; under normal circumstances, these assistants may count upon a relatively short working week and relatively generous wages.

#### 4. Nature of the Doctor's Duties:

It is a well-recognized fact that the doctor of medicine is on duty for 24 hours each day, seven days each week. He responds to calls at all hours of the day and night, maintains regular office hours, sets aside regular hours for visiting patients in hospitals and, in many cases, devotes a set number of hours weekly to the teaching of medical students or the attendance on patients in the free clinics of public and private hospitals. Ten hospitals in California handled 102,990 visits from out-patient surgical patients alone in the year 1941; this example indicates the large amount of time donated to this type of service by doctors of medicine. Considering all branches of medicine and all hospitals in California which render gratis out-patient service, the hours donated by doctors of medicine run into the hundreds of thousands and the monetary value of these gratis services into the millions of dollars.

#### 5. Nature of the Doctor's Responsibilities:

The doctor of medicine maintains an inviolable confidential relationship with his patients. He is ethically and legally responsible for the maintenance of this relationship; *he is also legally and ethically liable for the maintenance of this relationship by his office employees.* This means that his office assistants must be chosen with due regard for their assumption of this responsibility and that he is not able to hire office assistants in the general labor market and to accept the services of any applicant offered. One disclosure of a patient's ailment may ruin the doctor both professionally and financially and seriously hurt the patient.

In turn, this means that the office assistants of doctors of medicine cannot be replaced on a moment's notice. The working situation in a doctor's office is not analogous to that in a business office, where additional clerical employees may be added with a lesser degree of discrimination.

#### 6. Requests and Recommendations:

The doctors of medicine of California make no plea for the establishment of a Wage Order by this Board which will set a certain number of hours of maximum employment or a certain minimum weekly wage standard. They do, however, request the Board to take into consideration in its findings the facts recited above and to make due provision for these facts in whatever Wage Order may be forthcoming from the Board.

Specifically, the doctors of medicine petition the Wage Board to provide, in any order issued, for sufficient flexibility as to hours of employment to permit the doctors of medicine of California to maintain their physician-patient confidential relationships and to permit the working of additional hours over a weekly maximum if public health conditions so demand. If the Board sees fit to require that extra hours over a set weekly maximum shall be compensated for by the granting of a like number of hours of leisure in a later period, the medical profession would gladly assent to such an order.

Doctors of medicine are dealing with human life and health. The daily demands upon the doctors do not take into consideration the matter of hours. When epidemics or other health emergencies arise, the doctor of medicine becomes, in effect, a public health officer, upon whom may depend the health of an entire community. Under such circumstances it is patently unfair to demand that his office assistants must leave the office at the stroke of a clock, no matter how many patients may be awaiting the doctor's ministrations. If such demands are made, doctors of medicine will find themselves unable to secure additional assistants capable of maintaining the necessary confidential relationships with patients and of carrying

out the various duties of regular assistants. It should be borne in mind that, except for full time receptionists and bookkeepers in large urban offices, women employed by physicians are professional workers (e. g.—trained nurses and technicians) whose duties are an integral part of the physician's own duties. In this respect they are not comparable to employees in trades and businesses.

### Forced Hospital Insurance Termed Inimical to U. S. Way

New York, July 18.—The plan of a compulsory hospital insurance tax urged by the Social Security Board would commit the United States Government to a "perfectly gigantic experiment in health administration which is entirely foreign to our democratic way of life," according to Dr. Chas. Gordon Heyd, former President of the American Medical Association.

Dr. Heyd presented a summary of drawbacks which he attributed to the proposed tax at a meeting of the Public Health Committee of the New York Academy of Medicine.

A pay-roll tax of 1 per cent—one half of 1 per cent on the employer and one half of 1 per cent on the employee—has been considered by the Social Security Board, and legislation to this end may be introduced later this year.

The tax would apply to the 40,000,000 workers now covered by the Social Security system of old age and survivors' insurance, and to any new groups of workers who might later be legislated into the system.

#### Payments to Insured

Out of the receipts of the tax a payment of \$3 a day or some such sum would be made by the Government. The money would be paid to the insured person, who would be expected to pay the hospital.

In addition to the insured, hospitalization would be offered to their dependents, retired workers who had been insured and their dependents, and to survivors of the insured, Arthur J. Altmeyer, Chairman of the Social Security Board, has indicated.

Much opposition to the project has arisen within the medical profession. Dr. Heyd listed objections in part as follows:

Knowledge that the patient would get \$3 a day if sick might cause a person to take advantage of the plan and malingering.

The hundreds of millions of dollars in taxes which would accrue annually would, if properly spent, provide much more than contemplated in the proposal.

Political administration would result in the diversion of a substantial portion of the money to other ends.

Naming these as some of the non-professional disadvantages, Dr. Heyd then reviewed professional demerits as including:

There is no provision in the plan that the hospital or the doctor should get the \$3 which is paid to the patient by the Government.

Assuming that the patient will turn over the \$3 to the hospital, this amount would still not cover the cost of adequate service in the great majority of hospitals in the country. Yet, if the hospital attempted to charge the difference to the patient, it would be apt to encounter difficulties due to the feeling by the patient that if the Government considered \$3 a day for hospital care sufficient, it was no doubt enough.

#### Disastrous Subsidies

Such a situation would leave it to the hospitals to make up the deficits, and if the Government attempted to make subsidies to the hospitals covering the difference between the actual cost and the \$3 they received, the ultimate effect on the voluntary hospitals would be disastrous. The

plan would literally kill the voluntary hospital system, and research and initiative.

If the voluntary hospital system was disrupted, there would be no standard for the governmental hospitals, for these latter hospitals have been using the voluntary hospitals as a basis of comparison.

Assuming that the plan would provide a fair and honest medical hospital insurance scheme, who would pay for the medical services? The difficulties associated with the remuneration of the staff would be apt to result in deterioration of the quality of medical service.

Medical education would be disrupted, and the medical schools would eventually require a subsidy by the Government. This would mean that proper selection of medical students would be done away with.—*Christian Science Monitor*, July 20.

## COMMITTEE ON POSTGRADUATE ACTIVITIES†

### Institutes on Wartime Industrial Health

San Francisco—August 18  
Crockett—August 19  
Oakland—August 21  
San Diego—August 25  
Inglewood—August 26  
Glendale—August 27  
Huntington Park—August 28

#### SPONSORED BY:

California State Department of Public Health

California Medical Association:

Committee on Postgraduate Activities and Committee on Industrial Practice.

Western Association of Industrial Physicians and Surgeons:

#### FOR:

The Practicing Physician, the Industrial Physician, the Industrial Manager.

Announcements concerning the "Institutes on Wartime Industrial Health" were given in the Committee on Postgraduate Activities' department of the last two issues of the OFFICIAL JOURNAL (in July issue, on page 101; in August number, on page 150). The reports below give additional information.

The committees in charge were pleased and encouraged by the attendance and interest shown in the seven cities visited. Plans are in the making for the continuation of the Institutes. The programs will be amplified and other cities selected for the next series of Institutes, which it is hoped to present before January next. Officers and members of local medical societies who may be interested are invited to forward their requests or suggestions to the C. M. A. Committee on Postgraduate Activities, 450 Sutter, San Francisco.

\* \* \*

### 54-Hour Job Limit Advised by Doctor

War Workers' Health Theme of Experts Meeting Here

"We must not increase the hours of industrial labor beyond workers' physiological limits!" declared Dr. Carey P. McCord, Chrysler Corporation medical adviser, today. McCord was scheduled to be a principal speaker at the Institute on Wartime Health at the Clift Hotel this afternoon and evening.

† Requests concerning clinical conferences, guest speakers, and other information, should be sent to the California Medical Association headquarters office, 450 Sutter, San Francisco, in care of the Association Secretary, who is secretary ex officio of the Committee on Postgraduate Activities.

tions of the country attended. And that meeting was of importance to all the American people because it was a symbol of this country's preëminence in medical progress.

Doctors didn't come there for amusement. They came to listen, to learn, to see—to "talk shop." Six or eight motion picture theatres were in operation, showing medical films. There were special assembly halls for lectures, and scientific demonstrations were given on diabetes, heart disease, etc. Visitors from other nations expressed continuous amazement at the scope of the display. As one authority put it, the scientific exhibit was "the greatest postgraduate training course ever assembled anywhere in the world."

In war time, a meeting such as this takes on more than ordinary importance. Doctors discussed the advances that are being made in war medicine in treating patients suffering from horrible wounds. They discussed how the civilian population may be adequately served at a time when thousands of doctors are being called are problems that affect us all.

American medicine holds and will maintain world leadership, and with the hard years ahead, it will do more for suffering mankind than it ever did before.—Oakland *Saturday Press*, July 18.

## COMMITTEE ON PUBLIC HEALTH EDUCATION†

### Keep Doctors Healthy

Paul V. McNutt, chairman of War Manpower Board, recently pointed out that unreasonable demands on physicians' time must be avoided.

The necessity for this is apparent. Thousands of doctors have entered military service. By the end of this year, 20,000 additional physicians will be needed to serve our men in uniform. That need must be met, and it will be met. And one inevitable result will be a sharp decline in the number of doctors available to serve civilians.

Doctors in the larger towns and cities are "doubling up" in their desire to do all possible for all who really need their attention, and in the case of many country doctors, they are being continually called in to help out the city doctors who have their hands full or to supplement hospital staffs that have been reduced in numbers because of the ever increasing number of doctors and nurses who have answered the call to the colors.

This does not mean that anyone will have to go without necessary medical attention. It does mean that all must help so far as they can, to see that doctors are able to use their working time to the fullest advantage. To quote Mr. McNutt, on the doctor's part "it will mean long hours and hard work—sacrifices which will multiply the deep debt that every community owes to its physicians. There will be a real need to exercise every possible means for minimizing all unnecessary medical services."

In other words, you are asked to forego for the duration the "luxury" of wasting your doctor's time and energies. That is a real and necessary contribution to the

war effort, and to the protection of civilian health as well since the doctor can not be up and around "on his toes" if he has had to spend the night holding the hand of some neurotic woman whose husband has "abused" her by not noticing her new hair-do.—Kerman *News*, July 31.

## COMMITTEE ON HOSPITALS, DISPENSARIES, AND CLINICS

### A Rhode Island Suggestion\*

(COPY)

(Doctor: Post this notice prominently in your waiting room.)

#### SAVE YOUR DOCTOR'S TIME

The present emergency places many added responsibilities upon the doctor of medicine. Before the end of this year about one-third of the active practising doctors of this State will be doing military duty. The older doctors will be called upon to do the major part of the civilian work.

The doctor must make his calls geographically. Hence he must outline his work in different sections of the city at a reasonable hour in the morning. He must avoid calls to the same section of the city twice in the same day.

*Coöperate with your doctor during the wartime emergency in the following ways:*

1. If you desire a house visit, call the doctor around eight o'clock in the morning. This is a reasonable hour for most physicians. A person or child who has a temperature of 100° or over in the morning may be expected to have a higher temperature in the afternoon, so do not delay until you take the afternoon temperature.
2. Go to the doctor's office when you can, thus saving him the time necessary to make a house visit.
3. If you desire information on the telephone, help save his time by having a pencil and paper ready to note what instructions are given. If the patient is a child, do not take him to the telephone with you.

(Signed) PROVIDENCE MEDICAL ASSOCIATION.

### Some New Hospital Procedures

(COPY)

Attending Medical Staff

THE CALIFORNIA HOSPITAL

1414 South Hope Street, Los Angeles

*To the Members of the Staff, California Hospital:*

Due to the present hospital operating conditions, it is important that the following regulations of the Executive Medical Board be carried out. You will realize that the present shortage of nurses, costs of supplies and the over-crowded conditions make it necessary to establish certain routine in order to render the best service to your patients.

#### A. Standardization of surgery routine:

In order to conserve supplies, the standard skin preparation prior to surgery will be the Harrington's Solution. Two alternate solutions will be on hand but they must be ordered specifically by the surgeon. These alternate solutions will be Tincture of Merthiolate and Tincture of Iodine.

#### B. Scheduling surgery:

New regulations of the American College of Surgeons make it necessary that all operating schedules show not

† The Committee on Public Health Education was established through Substitute Resolution No. 6 at the Del Monte annual session, May 3, 1939.

The Committee on Public Health Education consists of Frank R. Makinson, chairman, Oakland; Philip K. Gilman, secretary, San Francisco; Samuel Ayres, Jr., Los Angeles; Thomas A. Card, Riverside; James F. Doughty, Tracy; Lowell S. Goin, Los Angeles; Dwight H. Murray, Napa; Henry S. Rogers (ex officio), Petaluma. Communications to the committee may be addressed to Frank R. Makinson, M.D., chairman, Wakefield Building, Oakland, or to the California Medical Association office, 450 Sutter Street, San Francisco.

\* Reproduction of text of a full page card in *Rhode Island Medical Journal*.



### Thinks 48 Best

"At present, a 48-hour week is as much as any worker should put in," he explained. "If a real need arises, that may have to be increased to 54 hours, but beyond 54 hours a worker's capacity is exhausted and little can be accomplished by added hours of work."

Other institute speakers scheduled are Dr. Robert T. Legge, J. J. Bloomfield, Dr. H. T. Castberg, C. H. Fry and Fred R. Ingram.

### First of Seven

Sponsored by the County Medical Society, the Institute is the first of seven such meetings to be held in California cities under the auspices of the California Medical Society, the Western Association of Industrial Physicians and Surgeons and the State Department of Public Health.

This afternoon and evening, San Francisco doctors, safety engineers, industrial nurses and management representatives are to study many phases of the health protection of war workers.—*San Francisco Call-Bulletin*, August 18.

\* \* \*

### Doctors Warn on War Plant Health Losses

*Avoidable Layoffs Cost U. S. 400 Million Man Days a Year, S. F. Conference Told*

More than 400,000,000 man days of productive war work are lost annually to the Nation through sickness, industrial accidents and other avoidable layoffs, San Francisco's first Institute on Wartime Industrial Health was told yesterday.

The conference of 150 physicians, plant managers, industrial engineers, nurses and State and Federal authorities also was told that this manpower loss, if conserved, was enough to build 5,000 flying cargo ships which Henry Kaiser has proposed.

### State's Problem

Because California leads the Nation in volume of war production, the State is faced with greater wartime health and industrial problems than the rest of the country, J. J. Bloomfield, of the United States Public Health, warned the meeting.

"Yet any war plant job can be done safely if there is real team work between plant management, the medical service, the engineering service and the employment department," he declared.

### Coöperative Groups

Yesterday's conference was sponsored by the California State Department of Public Health and the San Francisco County Medical Society and was held in coöperation with the California Medical Association and the Western Association of Industrial Physicians and Surgeons.

Dr. Robert T. Legge, emeritus professor of hygiene at the University of California and past president of the association, presided over the meeting. Other speakers were Dr. John W. Cline, president of the San Francisco County Medical Society; Dr. Harold T. Castberg and Fred R. Ingram of the State department of health; C. H. Fry of the State industrial accident commission; Frank P. Foisie, president of the Waterfront Employers' Association, and Dr. Nelson J. Howard, professor of clinical surgery, Stanford University School of Medicine.—*San Francisco Examiner*, August 19.

\* \* \*

### Health Board to Crockett

*'Women Pampered in War Plants'*

The Institute on Wartime Industrial Health moved to Crockett for a one-day stand today following a first-

day meet here yesterday.

Sponsored by the California Department of Public Health in coöperation with the California Medical Association and the Western Association of Industrial Physicians and Surgeons, the Institutes are being held in seven California cities to aid the practicing physician, the industrial physician and the industrial plant manager in meeting wartime problems.

The conference of 150 physicians, plant managers, industrial engineers, nurses and State and Federal authorities yesterday was told more than 400 million man days of productive war work are lost annually to the nation, all of them through sickness, avoidable layoffs or industrial accidents.

Manpower hours lost would be enough to build 5,000 flying cargo ships of the type proposed by Henry Kaiser, it was said.

The conference was told that women in war jobs are being spoiled and pampered to protect them against the "ills that women are heir to." Actually, that's all the bunk and women can do four out of five jobs that men can handle; they can work just as long, just as hard and perhaps a lot more efficiently, the conference was told by Dr. Carey P. McCord, medical director of the Chrysler Corp. and a nationally recognized authority on industrial health.

The institute will move to Oakland Friday, San Diego, Aug. 25, Inglewood, Aug. 26, Glendale, Aug. 27, and Huntington Park, Aug. 28.—*San Francisco News*, August 19.

### Three Institutes Slated on Health of War Workers

Three institutes on wartime industrial health are slated for the week of August 24 in Inglewood, Glendale and Huntington Park.

Health of war plant workers will be discussed. Subjects to receive attention will include conservation of industry's manpower, industrial hygiene and war production, occupational diseases and their controls, and surgical management of industrial injuries.

Physicians, safety engineers, industrial nurses and employers will attend. Noted medical experts will speak.

The Inglewood institute will be held August 26, at the Inglewood Country Club. Dr. John J. Durkin, president of the Inglewood branch of the Los Angeles Medical Society, will preside.

Dr. Carey P. McCord, medical adviser of Chrysler Corp., and national authority on industrial health problems, will be the principal speaker at all three meetings.

The Glendale session will be held August 27, at the Tuesday Afternoon Club. Dr. O. D. McCartney, vice-president of the Glendale Medical Society, will preside.

Dr. I. S. Cheery, president of the southeast branch of the county medical society, will preside at the Huntington Park institute on August 28, at the Women's Club.

The health institutes are part of seven arranged by the State Department of Health.

Noted doctors and specialists scheduled to speak include J. J. Bloomfield, of the National Institute of Health; Dr. Robert T. Legge, professor emeritus, University of California; C. H. Fry, State Industrial Accident Commission; Dr. Benjamin Frees, president of the Western Association of Industrial Physicians and Surgeons; Dr. E. E. Dart and Frank Stead, both of the Los Angeles Health Department.—*Los Angeles Daily News*, August 14.

### Greatest Postgraduate Course in World

A short time ago, the American Medical Association held its annual meeting in an eastern city. Despite gasoline rationing, more than 8,000 physicians from all sec-

sary), year of publication. Thus, Leahy, Leon J.: New York State J. Med. 40:347 (March 1), 1940.

Spelling should be correct. When in doubt consult a standard dictionary. The Journal has not adopted the short form of through, thorough, etc.

Phony locutions. "He operated ten cases." The surgeon operates in a case but on a patient. The patient is not the case. The patient dies or recovers, the case terminates fatally or ends in recovery. "Cases in whom" should be "cases in which." "Patient in whom" is correct.

Many physicians have envied Sir William Osler his apparently easy command of English writing. In the Osler Library is a collection of some of his manuscripts showing the various stages of preparation. First there are notes of various kinds, then a rough outline in long-hand, next a typewritten copy with interlineations, transpositions and deletions, a second typewritten copy also showing much modification, and finally a third typewritten copy, probably used by the printer. Even this third copy bears minor corrections.

Illustrations. All cuts required for illustrations are furnished at the author's expense. For detailed instructions regarding photographs, drawings cost, etc., apply direct to the editor.

(Signed) THE EDITOR AND THE EDITORIAL BOARD.

## COUNTY SOCIETIES†

### CHANGES IN MEMBERSHIP

#### New Members (23)

##### Alameda County (8)

Harry J. Borson, *Berkeley*  
A. Marion Field, *San Leandro*  
Wm. Henry Hatteroth, *Oakland*  
Julius Lewis, *Berkeley*  
Robert Lewis, *Berkeley*  
C. C. Morison, *Oakland*  
Charles Callender Smith, *Oakland*  
C. M. Wiseman, *Oakland*

##### Los Angeles County (1)

Floyd E. Harding, *Los Angeles*

##### Monterey County (1)

Charles Gratiot, *Monterey*

##### San Bernardino County (2)

Howard S. Downs, *Ontario*  
Scott Ryerson, *Daggett*

##### San Diego County (6)

Clarence M. S. Ching, *San Diego*  
McCleery Glazier, *San Diego*  
George J. Laird, *San Diego*  
Harry O. Lovell, *Pacific Beach*  
Paul Harold Peterson, *San Diego*  
M. D. Redding, *San Diego*

##### San Francisco (4)

Emma O. Dong, *San Francisco*  
Edmund Dean Godwin, *San Francisco*  
John J. Haman, *San Francisco*  
Augustus Stiegler, *San Francisco*

##### Ventura County (1)

Kenneth F. Schneider, *Carmillo*

Listen attentively to the patient; he has lived with his disease longer than you have.

† For roster of officers of component county medical societies, see page 4 in front advertising section.

## In Memoriam

**Gidley, Donald Stanley.** (Major, M.C., U.S.A.) Died at Fort Lewis, Washington, July 5, 1942, age 37. Graduate of the University of Oregon Medical School, Portland, 1930. Licensed in California in 1931. Doctor Gidley was a member of the San Bernardino County Medical Society, the California Medical Association, and a Fellow of the American Medical Association.

+

**Harbert, Ellis.** Died at Stockton, July 16, 1942, age 76. Graduate of Vanderbilt University School of Medicine, Nashville, Tennessee, 1893. Licensed in California in 1894. Doctor Harbert was a retired member of the San Joaquin County Medical Society, and the California Medical Association.

+

**Hogan, James Joseph.** Died at Cincinnati, Ohio, July 14, 1942, age 70. Graduate of Cooper Medical College, San Francisco, 1892. Licensed in California in 1892. Doctor Hogan was a retired member of the San Francisco County Medical Society, and the California Medical Association.

+

**Spiers, Homer Waldo.** Died at Los Angeles, July 10, 1942, age 57. Graduate of Columbia University College of Physicians and Surgeons, New York City, 1911. Licensed in California in 1912. Doctor Spiers was a member of the Los Angeles County Medical Association, the California Medical Association, and a Fellow of the American Medical Association.

+

### OBITUARY

#### Donald S. Gidley 1905—1942

Doctor Donald S. Gidley died at Fort Lewis, Washington, July 5, 1942, at the age of 37. He was a graduate of the University of Oregon Medical School, class of 1930, and was licensed in California in 1931. Dr. Gidley enlisted in the Medical Reserve Corps as a First Lieutenant in October, 1939, was promoted to a captaincy in October, 1940.

On March 1, 1941, he entered active service in the Medical Corps and received his majority on June 15, 1942. At the time of his death, he was the Regimental Surgeon at Fort Lewis. Major Gidley was in active practice in Ontario and a member of the San Bernardino County Medical Society and the California Medical Association, and was also a Fellow of the American Medical Association.

*Outlook for Mumps Control Improved.*—An outbreak of mumps in a military establishment may lead to serious consequences in the way of days lost through hospitalization, Conrad Wesselhoeft, M. D., late Captain, Medical Corps, United States Army, Boston, and Charles F. Walcott, M. D., Major, Medical Corps Reserve, United States Army, Cambridge, Mass., declare in the current issue of *War Medicine*, published bimonthly by the American Medical Association in cooperation with the Division of Medical Sciences of the National Research Council.

only the name of the operation, but the preoperative diagnosis or disease. Please give this information to the admitting nurse when scheduling surgery.

*C. Time of entry of patients:*

1. All patients being admitted for major surgery (except emergencies) must be entered in the hospital at 4:00 p.m. on the day previous to this surgery schedule. The admitting clerk is instructed to cancel the operating room schedule for the following day if the patient fails to arrive by 4:00 p.m.

2. Admitting minor cases (except emergencies) these cases should be in the hospital two hours before surgery. However, in tonsillectomy or similar operations, it is urged that these cases be admitted the day previous to surgery. If this is not feasible, it is requested that the patient report to the hospital one or two days before surgery for necessary laboratory work and history and physical by the intern.

*D. The following regulations will also be effective in connection with floor nursing service:*

1. All patients, whether private room or ward, who are up and around will bathe themselves.

2. No baths will be given on Sunday except to acutely ill patients and new postoperatives.

3. No back rubs will be given to patients in the evening, who are up and around.

4. No dressings will be done at tray time or after 7:00 p.m., except in cases of *absolute* emergency.

5. Carbogen inhalations require a great deal of nursing time and should only be ordered for patients with severe respirator depressions. Recommended procedure: Carbogen every 20 minutes (to point of hyperventilation) for first three hours.

Patients having spinal anesthesia: recommended procedure is deep breathing voluntarily instead of carbogen. It is recommended that where the above procedures cannot be carried out, special nurse should be ordered.

Your usual cooperation will be appreciated.

Very truly yours,

THE CALIFORNIA HOSPITAL.

## COMMITTEE ON ASSOCIATED SOCIETIES AND TECHNICAL GROUPS

### The Nurses' Aides

One of the most important jobs is that of being a nurses' aide. The Red Cross gives this training in hospitals of large cities, but it is likely that an unofficial form of training can be worked out for smaller hospitals, nursing homes, emergency outposts and private hospitals. This training must, however, be given only under the supervision of physicians and competent registered nurses.

The nurses' aide, when trained, does not replace the skilled care of the professional nurse. But she provides two hands and an intelligent head to turn to the smaller routine tasks which consume so much nursing time in hospitals. Doctors and nurses by the hundred keep going overseas. The supply of both is rapidly being depleted. If there should be an epidemic such as those of the last war, the country might be in as bad a way as it was then. Now, before any such disaster strikes, is the time to prepare. With the help of nurses' aides available, one experienced registered nurse can do the work of three. The doctor whose trained nurses are thus free for the more skilled and difficult jobs also finds his own time and energies multiplied.

A reporter investigating the matter brings in this informal word:

"As far as I can see the nurses' aides are about the only large organized group of volunteers who really work and keep to schedule and can be counted on. Real nurses think they're wonderful—which is something for a graduate nurse to say about volunteer help."

Knowing how to care for the sick never hurts any woman. In war or peace, life never fails to bring emergencies which make skill and knowledge useful.

### A Priority on Nurses

To the 70,000 American nurses eligible for Army and Navy service:

There is a priority on unmarried nurses between the ages of 21 and 40 today. It is the priority of the Army and Navy on your services.

As America's armed forces extend their activities along every front in the fight for freedom, the need for your services is increasing. The Army and Navy must be supplied with at least 3,000 nurses a month.

That is why we appeal to you, the 70,000 nurses eligible for war service, to enroll with the Red Cross Nurses' First Reserve now. If you are a graduate registered nurse, in good health, unmarried, and under 40, write today to the Red Cross Nursing Service, Washington, D. C.

## COMMITTEE ON PUBLICATIONS

### Preparation of Papers for Publication\*

In our efforts to improve the Journal we are faced with problems for the solution of which we ask the contributors' aid. Due to rising prices in general and to the increased cost of paper in particular, Journal costs are increasing. Space for scientific articles has been somewhat reduced by the creation of new departments made necessary by the war. For these and other reasons, we are submitting a list of suggestions to authors. If these are carefully followed, papers will decrease in length and increase in effectiveness.

Scientific articles should not exceed ten Journal pages and will be more carefully read if they are shorter than that.

Papers must be typewritten on one side only of white paper 8½ x 11 inches, double spaced throughout. The margins should be 1½ inches top and left side, 1 inch bottom and right side.

The pages, including tables, legends and bibliography, should be numbered consecutively.

The title should be brief and typed in capital letters. Under the title should appear the name of the author and the city in which he lives. His street address should appear at the end of the article.

There should appear in the text reference numbers typed above and to the right of the word to which there is a reference. The bibliography should be collected at the end of the article with the same reference numbers. The list should include the following items:

Books—author's surname followed by initials; title of book; edition; location and name of publisher; year of publication; volume; and page number. Thus, Osler, W.: *Modern Medicine*, ed. 3, Philadelphia, Lea & Febiger, 1927, vol. 5, p. 57.

Periodicals—author's surname followed by initials; name of periodical, volume, page, month (day if neces-

\* This article appeared in the *Illinois Medical Journal*, Vol. 80, No. 4.

## CALIFORNIA PHYSICIANS' SERVICE†

### Beneficiary Membership

September, 1939.....	1,220
March, 1940.....	9,322
November, 1940.....	19,990
May, 1941.....	27,057
November, 1941.....	32,199
May, 1942.....	38,061
July, 1942.....	34,520

The physicians of the State may like to know some of the background which resulted in the changes which are now being made in California Physicians' Service. The changes were designed primarily to bring unit value to a par basis. It may be of interest to compare the method with those of other well-known plans seeking the same end result.

All medical plans recognize the necessity of complete solvency in order to be successful. Solvency is one factor which eventually influences physician-patient relationships. It, of course, represents also the satisfying of the final objective, which is the solution to the riddle of medical economics. The distribution to the public of the advances of medical science is the fundamental which has created the necessity for the development of some plan to meet this need. The premise from which all pre-paid medical service plans start is as follows:

"A fundamental characteristic of an insurable hazard is that the frequency of the happening of the event which is the subject of the insurance should be subject to prediction within reasonable limits of error.

"A necessary corollary is that the happening of the event must not be subject to the control of the insured individual, or that there must be a strong incentive or desire on the part of the insured individual to avoid the happening of the event which is the subject of the insurance.

"It is equally necessary that the insured event shall be susceptible of precise and easily understood definition."

The readiness and frequency with which medical service is sought and the extent to which services may be rendered are factors of human conduct which are not susceptible of precise definition. It is this last which we feel has been responsible for the abnormal use of service experienced by California Physicians' Service during the past three years. We have demonstrated that the human conduct of the Medical Profession in handling thousands of patients can be trusted and relied upon. This has become a measurable factor with many constants which can be projected into the factor of various caseloads under various conditions. On the other hand, the beneficiary member has reacted in a manner that was unforeseen. All available figures indicated that the sickness rate for the average population would be 5 per cent to 7 per cent. Our predictions, under our plan, provided for double this. As time has gone along, we found that we were too conservative in our estimates. Figures month after month and then, beginning a sequence of years, showed that we were being called upon to handle three times the normal. Many of us were expecting a ripening process in time, due to the clearing up of old conditions, but we became convinced that this was not going to happen. We

knew some changes had to be made, but we also knew that these changes must meet certain requirements.

Primarily, C.P.S. had to develop a contract that would automatically control abuses. We believe that appealing to the human factor, in which there is a responsibility on the part of the prospective patient in seeking medical service, will help achieve this end. This is the basic provision for the surgical contract, in which a cutting procedure is the benefit. People do not subject themselves to this kind of treatment unnecessarily. When medical care is desired, the member can purchase the two-visit deductible contract in which he is called upon to pay for the first two visits to the attending physician. This puts the financial responsibility on the patient and, at least, stimulates thought before a doctor is called.

C.P.S. experience has shown that the use of service under the old full coverage was approximately 20 per cent, whereas, under the two-visit deductible, use was reduced to 4 per cent. We do not believe the welfare of the member is affected by this provision, since C.P.S. provides complete care for illnesses of consequence and the patient can feel that he has an adequate protection for unforeseen illnesses.

We could not have felt quite so secure in our position in making these changes if it were not for the fact that, as mentioned above, the medical profession of the State, as a whole, has cooperated fully in the program. It is quite evident that, when doctors work with doctors, the elements of suspicion, the tendency to pad bills, and the feeling that the individual physician is hampered in what he can do for the patient from a medical point of view, disappears. Since the medical profession has demonstrated quite conclusively that these factors may be relied upon, it places the Plan in a better position to succeed than any other type of administrative set-up so far conceived.

The human factor is an important element which must be considered in measuring results obtained, and our experience may point the way toward a type of administrative set-up that will work to the advantage of the medical profession, as well as to the welfare of the public. It is on such intangibles that success or failure of any endeavor involving human relations must depend.

### MEDICAL EPONYM

#### Morton's Toe

Thomas G. Morton (1835-1907), surgeon to the Philadelphia Orthopedic Hospital, described this condition in a paper, entitled "A Peculiar and Painful Affection of the Fourth Metatarso-Phalangeal Articulation," published in the *American Journal of the Medical Sciences* (71:N. S.: 37-45, 1876). He reported 15 cases, 13 of which were in women. All the patients complained of severe pain localized in the fourth metatarsophalangeal articulation. It was generally relieved by removal of the shoe. Some patients told of having to stop in the street for this purpose. Morton advised operation for the relief of chronic cases. The origin of the condition is described as follows:

"To the peculiar position which the fourth metatarsophalangeal articulation bears to that of the fifth, the great mobility of the fifth metatarsal, which by lateral pressure is brought into contact with the fourth, and lastly, the proximity of the digital branches of the external plantar nerve, which are under certain circumstances liable to be bruised by or pinched between the fourth and fifth metatarsals, may be ascribed the neuralgia in this region."—R. W. B., in *New England Journal of Medicine*.

† Address: California Physicians' Service, 153 Kearny Street, San Francisco. Telephone EXbrook 0161. A. E. Larsen, M. D., Secretary.

Copy for the California Physicians' Service department in the OFFICIAL JOURNAL is submitted by that organization. For roster of non-profit hospitalization associates in California, see in front advertising section on page 3, bottom left-hand column.



## MISCELLANY

Under this department are ordinarily grouped: News Items; Letters; Special Articles; Twenty-Five Years Ago column; California Board of Medical Examiners; and other columns as occasion may warrant. Items for News column must be furnished by the fifteenth of the preceding month. For Book Reviews, see index on the front cover, under Miscellany.

## NEWS

### Coming Meetings†

*California Medical Association*, Hotel Del Monte, Del Monte, California. Date for 1943 Session not yet decided.  
*American Medical Association*, San Francisco. Date of 1943 Session not yet decided.

### The Platform of the American Medical Association

The American Medical Association advocates:

1. The establishment of an agency of Federal Government under which shall be coordinated and administered all medical and health functions of the Federal Government, exclusive of those of the Army and Navy.
2. The allotment of such funds as the Congress may make available to any state in actual need for the prevention of disease, the promotion of health, and the care of the sick on proof of such need.
3. The principle that the care of the public health and the provision of medical service to the sick is primarily a local responsibility.
4. The development of a mechanism for meeting the needs of expansion of preventive medical services with local determination of needs and local control of administration.
5. The extension of medical care for the indigent and the medically indigent with local determination of needs and local control of administration.
6. In the extension of medical services to all the people, the utmost utilization of qualified medical and hospital facilities already established.
7. The continued development of the private practice of medicine, subject to such changes as may be necessary to maintain the quality of medical services and to increase their availability.
8. Expansion of public health and medical services consistent with the American system of democracy.

### Medical Broadcasts\*

*The Los Angeles County Medical Association:*

The following is the Los Angeles County Medical Association's radio broadcast schedule for the month of September, 1942:

- Saturday, September 5—KFAC, 8:45 a.m., Your Doctor and You.  
Saturday, September 5—KECA, 10:30 a.m., The Road of Health.  
Saturday, September 12—KFAC, 8:45 a.m., Your Doctor and You.  
Saturday, September 12—KECA, 10:30 a.m., The Road of Health.  
Saturday, September 19—KFAC, 8:45 a.m., Your Doctor and You.  
Saturday, September 19 and Saturday, September 26—KECA, 10:30 a.m., The Road of Health.  
Saturday, September 26—KFAC, 8:45 a.m., Your Doctor and You.

† In the front advertising section of *The Journal of the American Medical Association*, various rosters of national officers and organizations appear each week, each list being printed about every fourth week.

\* County societies giving medical broadcasts are requested to send information as soon as arranged (stating station, day, date and hour, and subject) to CALIFORNIA AND WESTERN MEDICINE, 450 Sutter Street, San Francisco, for inclusion in this column.

### Pharmacological Items of Potential Interest to Clinicians (From the U. C. Pharmacologic Laboratory—Chauncey D. Leake, Director):

1. *More Books:* International Publishers in New York go to town with W. H. Gantt's translation of I. P. Pavlov's essays from 1928 to 1936 on *Conditioned Reflexes and Psychiatry* (1941), and F. Schoff and W. C. Boyd's *Blood Grouping Technique* (1942; both well illustrated, the former has important biographical introduction, the latter is well documented. L. T. Webster issues neat summary on *Robies* (MacMillan, N. Y., 1942). Timely and richly illustrated is A. R. Moritz's *Pathology of Trauma* (Lea and Febiger, Phila., 1942). E. A. Evans edits symposium on selected recent aspects of *Biological Action of Vitamins* (Univ. of Chicago, 1942). E. R. Squibb & Sons (N. Y., 1942) offer a *Physicians' Reference Book of Emergency Medical Service*, which is fine for war work—except section on war gases which follows "official" pamphlets in making too much of identification and specific treatment. Excellent is W. C. Hueper's *Occupational Tumors and Allied Diseases* (C. C. Thomas, Springfield, Ill., 1942), with full discussion of chemical effects.

2. *General Culture, Fore and Aft:* If you want to know Aristotle, get the Random House one volume issue of the Oxford translations, with commentary (N. Y., 1941). J. J. Izquierdo gives a good account of Claude Bernard with translation (Spanish) of the Introduction to the Study of Experimental Medicine (Univ. of Mexico, 1942). Significant is Volume VIII of *Biological Symposia on Levels of Integration in Biological and Social Systems* (Cattell Press, Lancaster, Pa., 1942). Take note of Eliot Blackwelder's *Science and Human Prospects* (Thinker's Forum No. 19, Watts, London, 1942).

3. *War Medicine:* Here's success to Lippincott's *Clinics*, Volume I, No. 1 (June, 1942) of which contains a helpful symposium on burns and shock. F. V. Stonham (*Med. J. Austral.*, 1:611, May 30, 1942) in discussing late treatment of war wounds finds that direct contact of cloth dressings impedes healing, but that closed plaster methods are O.K. C. Lyons and C. Burbank review local sulfonamide therapy (*Surg. Gyn. Obs., Internat. Abs. Surg.*, 74:571, 1942). Well documented symposium on plasma concentrates in transfusion in *Texas St. J. Med.*, (37:195, 1942). Committee on Chemotherapy National Research Council (*War Med.*, 2:488, 1942) recommends high vitamin intake daily for wounded patients until recovery. If you're interested in war gas action, and haven't yet seen P. C. Livingston and H. M. Walker's study of the effects of mustard on the eyes, look it up (*Brit. J. Ophth.*, 24:76, 1940).

4. *Research and Teaching:* A. E. Casey (*Science*, 96: 110, July 31, 1942) shows high correlation between productive research in medical schools and effectiveness of teaching; similar correlation might be shown between State Board performance and intellectual character of medical student! Maybe good men go to good schools.

5. *Here and There:* J. L. Morrison and G. A. Emerson find that steep gradient of butyl-bromoallyl-barbituric acid distribution in central nervous system is effective in antidoting metrazol and strychnine convulsions, but not cocaine (*Anesth. and Anal.*, 21:213, 1942). K. Dunlap and R. D. Loken (*Science*, 95:554, May 29, 1942) rec-

commend high vitamin A intake for "clearing" color blindness. L. Farmer and R. Fribourg (*Proc. Soc. Exper. Biol. Med.*, 50:208, 1942) find that thyroid extract increases sensitivity to histamine by depleting adrenals of cortin. C. L. Rose, P. N. Harris and K. K. Chen (*Ibid.*, p. 228) report on toxicity of dicumarol (2 mg per kg IV; 5-50 mg per kg orally). W. S. Preston, W. D. Block and R. H. Freyberg (*Ibid.*, p. 253) find that procaine may inhibit auricular fibrillation. G. L. Hobby, K. Meyer and E. Chaffee (*Ibid.*, p. 277-288) add much to knowledge of action of penicillin. M. Prinzmetal, G. A. Alles, et al (*Ibid.*, p. 288) report that heat-inactivated tyrosinase preparations can produce lowering of blood pressure and remission of symptoms in hypertension. J. B. deC. M. Saunders, J. Nuckolls and H. E. Frisbie make fundamental contribution to histology of enamel and to amelogenesis (*J. Amer. Coll. Dent.*, 9:107, 1942).

**Dr. Chauncey D. Leake leaves University of California: Has Accepted Position in University of Texas Medical School.**—Appointment of Dr. Chauncey D. Leake, head of the University of California department of pharmacology and librarian of the university's medical school, as executive vice-president of the University of Texas medical branch at Galveston, was announced yesterday.

Doctor Leake has been with the University of California since 1928.

His appointment was officially announced by Dr. Homer Price Rainey, president of the University of Texas, according to Associated Press reports.

In his new position, Doctor Leake will be dean of the medical branch of the university and will also have administrative jurisdiction over the John Sealy Hospital and the College of Nursing at Galveston.—*San Francisco Examiner*, August 23.

**World at War Notes Anniversary of Treaty Founding Red Cross.**—A war-engulfed world on August 22 will note the 78th anniversary of the signing of the Treaty of Geneva, under which the International Red Cross Committee was established.

Signed in 1864, the treaty provided the foundation of the 61 Red Cross societies, including the American Red Cross, in existence today.

Out of the treaty also grew methods of providing humanitarian care for sick and wounded soldiers, regardless of nationality, in war-time, and the protection of hospitals, ambulances, and personnel caring for them on the field of battle. Subsequent treaties extended these services and also provided for reciprocal agreements between nations for the better treatment of prisoners of war. Headquarters of the International Red Cross Committee still are in Geneva. Since last December it has handled thousands of inquiries from the American Red Cross on the whereabouts of missing soldiers and captive civilians in belligerent countries. It also is the clearing house through which the American Red Cross obtains delivery of food, clothing and medical supplies to Americans who are prisoners of war.

Signing of the treaty was brought about through the efforts of Henri Dunant, a Swiss idealist.

**Insulin Comes of Age.**—Twenty-one years have passed since the discovery of insulin, which brought the Nobel prize to Banting and his associates, and gave a renewed lease on life to numberless sufferers. The patent on the manufacture of insulin, held by the University of

Toronto, expired at the end of last year, and the maintenance of adequate standards of purity and strength is, in this country, now controlled by the United States Food and Drug Administration. Since those early days in the University laboratory, where the first crude insulin was prepared, research has continued unrelentingly, and today improved forms of insulin are available, one of which, by its more gradual action, approaches the normal physiological function of the human product. To the current generation of doctors trained in the modern treatment of diabetes, the distressing outlook for the diabetic in pre-insulin days is a matter of historical record rather than of personal experience.

In this experience, as in the general population, it is in childhood and in early adult years that the greatest reduction in mortality has taken place, and, indeed, when attention is thus concentrated on a group of actual diabetics, the reductions at these ages are spectacular. At ages under 20, for example, the death rate has been cut to as little as 3 per cent of the very high rate prevailing in the pre-insulin era. At ages 20 to 39 the recent rate is only 5 per cent of the death rate before insulin. At higher ages the improvement, though not so spectacular, is still very considerable.

Further light on the effect of modern treatment is brought out by such as pneumonia and influenza, has taken a sharp drop, to little more than one-third of the former rate; and with the success in the use of sulfa drugs, which were introduced only at the end of the 10-year period here covered, the prospect is for still further reduction.

It is instructive to express the improvements in mortality in terms of the corresponding gains in longevity. Today, the average diabetic child of 10 may be expected to celebrate his 50th birthday, whereas just prior to 1922 most diabetic children lived little more than one year after the onset of their disease.

**Scientist Says 1980 Outlook Is One Child to a Home.**—Paul C. Glick of the United States Census Bureau predicts that by 1980, American families will average only one child each.

Supported by figures, Glick discussed the declining national birth rate at the annual meeting of the American Sociological Society.

The first census of the United States, taken in 1790, showed more families of five persons than any other number. A century later, the number of children per family had dropped to four.

"In 1900, the census revealed only three persons to a family," Glick said, "and by 1930 the family size had been reduced to two, thus revealing that in 140 years the typical family size had changed from five persons to two."

#### Forecast for 1980

Glick forecast that by 1980 there would be fewer than one child under 21 years old residing in the average family.

**Smallpox Now at Lowest Ebb in U. S.; Danger Seen in Population Shifts.**—An all-time low record for smallpox in the United States was set in 1941, but health authorities warn against overconfidence about the smallpox situation.

An increase in smallpox cases can confidently be predicted, they point out, if people generally get the false notion that vaccination against smallpox can be dispensed with. In that case the growing number of unprotected persons will provide a new fertile field for a resurgence of the disease.

The shift, because of the war, of thousands of fami-

lies of war workers from smallpox areas to cities previously free of smallpox may lead to outbreaks in these cities. The best protection against this danger is a widespread and vigorous campaign for vaccination, including revaccination of adults.

Only 1,432 cases of smallpox were recorded for the entire country for the year 1941. Chief center for smallpox in the United States in past years has been in the northwestern corner of the country. Montana, Washington, Idaho, and Oregon have generally been the states with the highest incidence, with the states adjacent to these four having next highest rates.

Outstanding exception to the rule of low smallpox incidence in the rest of the country is Indiana. During the past 20 years this state has had about four times the number of smallpox cases recorded by all of the New England and Middle Atlantic States plus Delaware, Maryland and the District of Columbia, although its population is less than one-tenth that of the eastern region.

### California

**Art Work of California Physicians.\***—A list of physicians whose work in art is illustrated in "*Parergon—Work by the Side of Work*," follows:

TITLE OF SUBJECT	NATURE	NAME OF ARTIST
Indian Road	Oil	J. Francis Smith, M. D. Los Angeles
Mixed Flowers	Oil	John Tavlopoulos, M. D. San Francisco
Jonquill	Oil glass paper	Thomas M. Potasz, M. D. Los Angeles
Flowers in the Green Vase	Oil	Ruth A. Knoph, M. D. San Francisco
Off for a Ride	Photograph	F. W. Hodgdon, M. D. Pasadena
Monterey Fisher- men	Photograph	R. A. Kocher, M. D. Carmel
Capistrano Mission	Oil	E. F. Maginn, M. D. Los Angeles
Textures, Old and New	Photograph	Mary H. Layman, M. D. San Francisco
Weathered	Photograph	K. C. Ashley, M. D. Los Angeles
Seascape	Oil	Francis H. Redewill, M. D. San Francisco
Shadows	Water color	Martha Mottram, M. D. San Francisco
Fairyland	Miniature relief	Lokrantz, Sven, M. D. Los Angeles
Sierra Lake	Oil	E. R. Lambertson, M. D. Los Angeles
Tennessee Chain Gang	Wood	Rachel E. Arbuthnot, M. D. Glendale
Mission Valley	Oil	J. C. E. King, M. D. San Diego
Dr. Joseph P. Widney	Bronze	Emil Seletz, M. D. Los Angeles
Perpetual Snow, Mt. Rose	Pastel	W. H. Strietmann, M. D. Oakland
Caldium	Pastel	Mary Hess Brown, M. D. Los Angeles
San Mateo Hills	Oil	Asa Collins, M. D. San Francisco
Near San Diego	Oil	Saul S. Robinson, M. D. Los Angeles
A Priest at the Temple of Shiloh	Sculpture	Arthur Smith, M. D. Los Angeles
Patriarch	Penknife carving from avo- codo seed	Harry Fist, M. D. Los Angeles
Canyon in Utah	Oil	Paul K. Sellew, M. D. Los Angeles
Persia	Oil	Louis Guggenheim, M. D. Los Angeles
Lebenslust	Plaster	Henry G. Bieler, M. D. Pasadena
Lilies of the Field	Photograph	G. J. Hall, M. D. Sacramento
Figure in Repose	Oil	R. H. Kennicott, M. D. Los Angeles
Composition from Life Magazine	Oil	L. J. Courtright, M. D. San Francisco
Ojai Sycamores	Water color	Neville T. Usher, M. D. Santa Barbara
Maryann	Color photo- graph	John Budd, M. D. Los Angeles
Bowl	Wood carving	Robert A. Campbell, M. D. Los Angeles
Navajo	Photograph	Burt L. Davis, Jr., M. D. Palo Alto
Landscape	Oil	Ernest H. Nast, M. D. San Francisco
Julley	Oil	F. L. Mullen, M. D. San Francisco
Little Lady Make Believe	Photograph	J. Edwin Scobee, Jr., M. D. Los Angeles
Rocky Coast	Oil	A. W. Dowd, M. D. Santa Monica
Jitterbug	Photograph	Abraham Marians, M. D. Los Angeles
Man with Long Nose	Plaster	Monte Salvin, M. D. Los Angeles
Belvedere	Oil	S. P. Lucia, M. D. San Francisco
Landscape	Water color	R. Proctor McGee, M. D. Los Angeles
Inward Bound	Oil	Lewis Sayre Mace, M. D. San Francisco
Artichoke Ranch	Photograph	A. W. Henry, M. D. San Leandro
"George"	Oil	R. J. Pickard, M. D. San Diego
Burgomaster 1938	Seal satin skin	Paul E. Wedgewood, M. D. San Diego
Water Jug	ceramic Charcoal	Joseph C. Savage, M. D. Los Angeles
Portrait	Crayon	R. de R. Barondes, M. D. San Francisco
Duchess of Windsor	Wood	R. W. Burlingame, M. D. San Francisco
At Dawn	Terra cotta	J. K. Moore, M. D. Los Angeles
The Prisoner	Pencil	Ernest M. Hall, M. D. Los Angeles
Lincoln	Water color	S. H. Babington, M. D. Berkeley
Hopi Owl	Oil	Marcia A. Patrick, M. D. Los Angeles
Rain God	Wood	Frederic Ewens, M. D. Beverly Hills
Penguins	Plaster	H. B. Graham, M. D. San Francisco
Wood Sculpture	Photograph	Dell T. Lundquist, M. D. Palo Alto
Portrait	Photograph	Frank E. McCann, M. D. Monrovia
"Happier Days" (Bavarian Herder)	Carved walnut	Albert D. Davis, M. D. San Francisco
Mask	Oil	Ethel Lynn, M. D. San Francisco
Man's War-Lust Strikes	Pottery	Salvadore Monaco, M. D. Los Angeles
Sgraffito Vase	Photograph	H. L. Thompson, M. D. Los Angeles
Storm Over Yosemite	Photograph	Llewellyn Lewis, M. D. Los Angeles
La Lavendera	Photograph	George Dock, M. D. Pasadena
Mitten Butte, Monument Valley, Utah	Sculpture	Peter N. Fisher, M. D. Van Nuys
William Rhodes Harvey	Water color	J. M. Olmsted, M. D. Berkeley
Rush Hour, En- senada, Mexico	Water color	Katherine M. Close, M. D. Los Angeles
Magnolia Bud	Orangewood carving	Philip S. Doane, M. D. Pasadena
Bunch of Oranges	Plaster	Edward S. Ruth, M. D. Los Angeles
The Pioneeress	Sculpture	S. Maisler, M. D. San Francisco
Mother	Photograph	George D. Maner, M. D. Los Angeles
Pacifica	Bronze	Cyril B. Courville, M. D. Los Angeles
Harvey Cushing	Clay	Albert A. Best, M. D. Los Angeles
Billroth	Plaster	Otto P. Diederich, M. D. Fresno
Portrait	Wood carving	Frank L. Dennis, M. D. San Diego

\* For editorial comment in this issue of C. and W. M., see page 172.

Pressure Is Determined, Unceasing Penguin	Marble	Hans Briesen, M. D. Los Angeles
	Carving	David S. Alpert Los Angeles

**Plague Infection in Human Beings Reported in the United States During 1941.**—Two fatal cases of plague in human beings were reported in the United States in 1941, both in Siskiyou County, California. The first case occurred in a 10-year-old boy, residing near Montague, with onset on June 14 and death on June 26. The diagnosis was confirmed bacteriologically. The second case occurred in a 5-year-old boy living 1 mile northwest of Mount Shasta City, about 50 miles from the locality in which the other case occurred. The diagnosis was confirmed by animal inoculation and the isolation of pure cultures.

The source of infection in each case was believed to have been ground squirrels; and the distance between the two localities in which the cases occurred indicated widespread rodent infection in the area. This was subsequently proved to be the case by the finding of plague infection in pools of fleas taken from ground squirrels in various localities in Siskiyou County.

Plague infection in rats, wild rodents, and parasites from rodents was reported during 1941 in 8 western states—California, Colorado, Idaho, Montana, New Mexico, North Dakota, Oregon, and Washington. It was found for the first time in North Dakota. On July 12, 1941, the infection was proved in fleas collected on June 23 from ground squirrels (*C. richardsonii*) shot in a locality about 7 miles northeast of Crosby, Divide County, and about 6 miles south of the Saskatchewan-North Dakota boundary. It is believed that this locality is the farthest east in which plague infection has been found in wild rodents or their ectoparasites in the United States. The farthest east where the infection had previously been proved to be present was Dona Ana County, New Mexico, where an infected kangaroo rat was found in 1939.

Infected rats and infected fleas from rats were found in San Francisco and Richmond, Contra Costa County, California, during the year.

**Antisymphilitic Agents Discovered by Stanford School of Medicine.**—Nearly a half a million cases of syphilis have been arrested, if not cured, during the past nine years through the use of iodobismutol and sobisminol, two antisymphilitic agents discovered and developed by the Stanford University School of Medicine.

This estimate is based on the total sales by distributors of the two products and the amount of the compounds used in the effective treatment of syphilis, according to Dr. P. J. Hanzlik, head of the Stanford department of pharmacology. He estimates that 740,000 full therapeutic courses of antisymphilitic treatment of the bismuth compounds have been given by practicing physicians, hospitals, and clinics. Iodobismutol is injected intramuscularly, and sobisminol, which was developed only two years ago, is taken by mouth. Dr. Hanzlik said:

"As a result of the discovery of these two bismuth compounds by systematic researches over a period of 13 years, Stanford University has directly contributed tangible benefits to human society, and there is reason to believe that similar benefits from the same source will continue."

Although there have been other agents for treating syphilis, sobisminol and iodobismutol are especially effective in controlling neurosyphilis, one of the later and most dangerous stages of the disease which attacks the brain and nervous system.

**American College of Physicians.**—At the Annual Meeting of the American College of Physicians, held in Atlantic City, June 6-8, 1942, John C. Sharpe, M. D., of Salinas, was elected a member of the Board of Governors of the college.

Interesting scientific programs were presented at the meeting and constructive plans laid out for the future.

**Congress of the American College of Surgeons Scheduled for Cleveland, November 17 to 20.**—The 1942 Clinical Congress of the American College of Surgeons (address, 40 East Erie Street, Chicago), originally scheduled for October at the Stevens Hotel, Chicago, which was taken over August 1 by the United States Army Air Corps, will be held in Cleveland, with headquarters at the Cleveland Public Auditorium, from November 17 to 20, according to an announcement from the College headquarters in Chicago. The twenty-fifth annual Hospital Standardization Conference sponsored by the College will be held simultaneously.

The program of panel discussions, clinical conferences, scientific sessions, hospital meetings, and medical motion picture exhibitions at headquarters, and operative clinics and demonstrations in the local hospitals and Western Reserve University School of Medicine, has been centered around the many medical and surgical problems arising out of the prosecution of all all-out effort to win the war, emphasizing the needs of the rapidly expanding medical services of the Army and the Navy, and consideration of special problems related to the increasing activities for civilian defense.

**Press Clippings.**—Some news items from the daily press on matters related to medical practice follow:

#### What Is Rabies?

Rabies is an acute and highly fatal disease, generally communicated to man through a wound by the teeth of some infected lower animal, the saliva being the infective medium. Dogs, cats, goats, cows, horses and other animals are susceptible to the disease and their bites are very dangerous. Rabies may also be contracted by allowing the saliva of an infected animal to come in contact with a cut or abrasion on the hand or other part of the body. This sometimes happens in adjusting muzzles or administering medicine; therefore, great care should be used in such operations, for it has been proven that in the case of the dog the saliva is virulent (infectious) from twenty-four to forty-eight hours before the dog shows any signs of being sick.

The main factors necessary to observe for the precaution against rabies are (1) keep your dog on your own property, properly enclosed and safeguarded; (2) when taken out within the city limits, have him securely leashed; (3) report stray dogs to the City Humane Department, Michigan 5211, Station 2323; (4) when bitten by a dog, have the wound cauterized with fuming nitric acid by your own physician, or report immediately to the nearest emergency hospital or police station for treatment, then report the incident in detail for your own protection to the Los Angeles City Health Department, Rabies Control Division, Michigan 5211, Station 429.

An outbreak of rabies in the Harbor area has been successfully terminated and brought under control by strict policing and spot quarantining: 8776 homes were contacted, 2503 dogs were placed under 90-day quarantine, and 2318 placards were placed on homes giving owners quarantine instructions. One human life was lost in this outbreak; however, it was through no fault of this division, as the victim was instructed to report to the Health Department for treatment and did not do so.

The Rabies Control Division wishes to thank the medical and veterinary professions for their splendid cooperation in reporting dog bites and treatment to us with the least practicable delay.—Los Angeles City Health Department Bulletin.

#### Stanford, U. C. Speed Medical Training

Stanford and the University of California will graduate about 280 doctors of medicine in the next three years in-



stead of four, under a wartime speedup program, the California Medical Association said today.

This is part of the record breaking plan to graduate 21,000 physicians from American medical colleges in the next three years announced today by the American Medical Association Council on Medical Education. The figure represents 5000 more than would have graduated in that period under a normal program.

Each of the two schools graduates approximately 70 doctors a year, the state association said. Under the speedup plan the students' 36 months of training will run without interruption rather than through 48 months. California deans took this step a year ago.

Nationally the program provides more than two graduating physicians for every death of a practicing doctor.

The council reported the increased graduation of doctors was being accomplished in 53 approved medical schools with no sacrifice of educational standards.

The four-year course has been reduced to three by elimination of summer vacations, with the result that a class is graduated every nine months.

In addition, approximately 220 United States citizens will graduate during the period from Canadian medical schools, the report said.

Arrangements have been made to license the short course physicians in 41 states, the District of Columbia, Alaska and Puerto Rico. Seven states, Georgia, Illinois, Kansas, Michigan, Nebraska, New Jersey and South Carolina, do not permit granting of licenses to the short-term students but corrective legislation was being sought. —San Francisco News, August 13.

\*\*\*

#### Many Cases of Syphilis Arrested by Stanford-Developed Agents

Nearly half a million cases of syphilis have been arrested, if not cured, during the past nine years through the use of Iodobismutol and sobisminol, two antisypilitic agents discovered and developed by the Stanford University School of Medicine.

This estimate is based on the total sales by distributors of the two products and the amount of the compounds used in the effective treatment of syphilis, Dr. P. J. Hanzlik, head of the Stanford department of pharmacology, said today. He estimates that 740,000 full therapeutic courses of antisypilitic treatment of the bismuth compounds have been given by practicing physicians, hospitals, and clinics. Iodobismutol is injected intramuscularly, and sobisminol, which was developed only two years ago, is taken by mouth.

"As a result of the discovery of these two bismuth compounds by systematic researches over a period of 13 years, Stanford University has directly contributed tangible benefits to human society, and there is reason to believe that similar benefits from the same source will continue," Dr. Hanzlik said.

Although there have been other agents for treating syphilis, sobisminol and Iodobismutol are especially effective in controlling neurosyphilis, one of the later and most dangerous stages of the disease which attacks the brain and nervous system. —Palo Alto Times, August 13.

\*\*\*

#### Sulfa Drugs Are Proving Great Boon to Mankind

The American Medical Association reports sulfa drugs are saving seventy-five out of every 100 patients stricken with influenza meningitis and about ninety out of every 100 with meningococcus meningitis. These figures were obtained from tests conducted in public hospitals and there is no reason to believe they do not represent a fair cross section of the results to be expected.

Before the sulfa derivatives were tried, the mortality was exceedingly high, ranging up to 100 per cent in influenza meningitis.

No less startling is the record achieved in treating battlefield injuries. The sulfa drugs have proved to be among the outstanding recent developments in medical science.

Without them many more American fighting men would have been entered in the fatality table. Without them many a baby would have lost its life.

War is horrible at best but it is a blessing to all humanity when something is discovered which tends to restrict its scars. And the same certainly can be said when new treatment insures longer life and tempers or routs altogether the effect of hitherto fatal maladies.

The sulfa drugs deserve no less a distinction than to be acclaimed as one of modern medicine's greatest boons to mankind. —Fresno Bee, August 14.

\*\*\*

Vallejo Is Given \$1,750,000 Fund for New Hospital  
Vallejo, Aug. 18.—President Roosevelt has approved

Vallejo's new \$1,750,000 hospital project, according to telegraphic word received here last night from Congressman Frank H. Buck.

The 250-bed hospital, now listed as an official city project, probably will be operated by the city in conjunction with the Solano County Medical Association, according to Perkins. In addition to the hospital proper the project also includes a 100-bed nurses' home.

The hospital, Perkins said, will be located close to the juncture of Sonoma Street Extension and the Napa Road, two miles north of the city proper.

All plans and specifications for the hospital, which will be staffed by Vallejo doctors, have been completed, Perkins said, and it will be possible to begin excavation operations within two weeks, if the contract is let. —Oakland Tribune, August 18.

\*\*\*

#### Hospital to Be Dedicated

##### Kaiser Institution for Shipyard Workers to Be Opened Friday

The Permanente Foundation Hospital, established to increase the efficiency of war workers at the three Richmond shipyards, sponsored by the organization of Henry J. Kaiser Company, will be dedicated Friday.

The ceremonies will begin at 2 p.m. at the MacArthur Boulevard and Broadway site, with Joseph R. Knowland, publisher of The Tribune, serving as the principal speaker.

Clay Bedford, general manager of the three yards, will act as master of ceremonies.

Other speakers will be Dr. Benjamin Black, Alameda County medical director, and Dr. John F. Slavich, Mayor of Oakland. The Rt. Rev. Noel Porter, Episcopal Bishop of Sacramento, will deliver the invocation and benediction.

#### Complete Equipment

The hospital, one of the most modern in the Bay area, provides complete facilities for the care of the thousands of workers brought to Metropolitan Oakland by the Richmond yards. It has a clinic for "out" patients, with pharmacy, physiotherapy and x-ray rooms and emergency surgery on the first floor; rooms and wards for "in" patients on the second and third floors, and three surgeries on the fourth floor.

Approximately \$333,000 was expended on land purchase, building and equipment. The original structure, once a part of the old Fabiola Hospital that was closed in 1932, was of reinforced concrete construction.

#### Beds Provided

Accommodations have been provided for 55 "in" patients and, according to Edward Dodds, superintendent of construction for California Kaiser Company, an additional 20 could be handled in the event of a disaster.

A field hospital has been established at the yards in Richmond by the U. S. Maritime Commission.

The Permanente Foundation was founded by Mr. and Mrs. Henry J. Kaiser. Both the Permanente Foundation Hospital and facilities were provided by them and transferred to the Foundation.

#### Fourfold Purpose

Purpose of the Permanente Foundation is fourfold. First, it will establish hospital facilities for war workers which are not now available. Second, it will provide funds for research into industrial medicine. Its third objective is to set up fellowships for the training of physicians and nurses in specialties; its fourth, to provide modern medical facilities in rural as well as urban areas. The urban facilities will, the Foundation anticipates, offer inducements for young doctors leaving the armed forces to enter practice in non-metropolitan districts where there exists a shortage of doctors. —Oakland Tribune, August 19.

I believe that it is up to the health department to assume leadership and responsibility for a broader field of public health. Our job should be something more than preventing disease and reducing death rates. Good health, not mere survival, is of the greatest importance to mankind. Happy and wholesome living should be our goal. The success of our activities for the attainment of a maximum of health for the people will depend upon wise planning, efficient operation, and constant employment of practical measures. —JOHN L. RICE, M.D., Commissioner of Health, New York City.

Following the line of least resistance is what makes men and rivers crooked. —Blemis Blotter.

## MEDICAL JURISPRUDENCE†

HARTLEY F. PEART, ESQ.

San Francisco

### Importance of X-ray Examinations

A constantly reoccurring source of litigation is the alleged failure of a physician to correctly diagnose an injury or ailment when he is first consulted. The result of an improper diagnosis may be that a harmful course of treatment is prescribed, and when the patient discovers the mistake he brings a court action against the physician for malpractice. The rule is usually stated to be that a physician does not insure the correctness of his diagnosis. However, a patient is entitled to an ordinarily careful and thorough examination such as the circumstances, the condition of the patient and the physician's opportunities for examination will permit. Honest errors of judgment are excused in cases where physicians might reasonably arrive at different interpretations of the symptoms displayed, but no physician may relieve himself of responsibility unless he has first exercised ordinary and reasonable care and skill, and has given the patient the benefit of his best judgment.

The necessity for utilization of approved methods of diagnosis is demonstrated in the case of *Burford v. Baker*, 53 A.C.A. 337 decided by the California District Court of Appeal on July 8th, 1942. The plaintiff in this case was a minor of the age of fourteen years who was the victim of an automobile accident. On the day of the accident, and soon after it occurred, he was taken to the office of the defendant, an osteopathic physician, who had been acting as the family physician for some years, treating the plaintiff for various ailments including a glandular disturbance. The boy walked with a noticeable limp at the time the defendant was first consulted and his hip was discolored and swollen. The defendant failed to follow the suggestion of the plaintiff's father that an x-ray be taken, and after examination, stated that the injury was only a bruise or muscle strain which should be treated by the application of hot towels. When the injury did not respond to this treatment and after the plaintiff had made numerous visits to the defendant's office with an increasingly severe limp, the defendant stated that arthritis had developed and insisted that the leg should be exercised and that the boy should be prevented from forming the habit of favoring his right leg. Despite several requests by the plaintiff's father, no x-rays were taken. The result of the injury and this treatment was that the plaintiff's right leg became an inch shorter than his left leg and he suffered a permanent loss of motion in his right hip.

After the defendant's services were terminated

and ten months after the accident, an x-ray of the plaintiff's hip disclosed that he was suffering from a separation of the femoral epiphysis. Attempts were made to reduce the separation and the hip and leg were placed in a cast. But this treatment was unavailing.

At the trial of the malpractice action which the plaintiff subsequently brought, charging negligence in diagnosis and treatment, expert testimony was given to the effect that an osteopathic physician who possesses the ordinary skill and knowledge of similar practitioners in the community in which the defendant practiced, would, under the circumstances, have had an x-ray taken of plaintiff's injured hip soon after the plaintiff first developed the limp and complained of pain in his hip. The defendant attempted to prove that the epiphyseal separation resulted from the glandular disturbance for which he had been treating the plaintiff, but the Court chose to believe the testimony of plaintiff's experts to the effect that premature weight bearing and the defendant's failure to immobilize the hip had caused the separation. The failure to use x-ray in diagnosing the injury was held to constitute negligence and a judgment was rendered against the defendant.

This is not the first time in California that a malpractice action has been prosecuted successfully against a physician for his failure to use x-ray in diagnosing injuries of the type involved in the *Burford* case. The facts of this case bear a striking similarity to the case of *Rankin v. Mills*, 207 Cal. 438. There the defendant physician had also neglected to have x-rays taken of an injured hip and he was held responsible for his improper diagnosis and treatment.

These two cases would seem clearly to establish the proposition that if a physician fails to have x-rays taken of any type of bone injury, and thereby fails properly to diagnose and treat the injury, he will be held for any damages which could have been avoided if an x-ray had been taken and a proper treatment prescribed on the basis of what the x-ray would disclose. This proposition seems inherently reasonable in view of the accessibility of most communities to x-ray apparatus. There is very little that can be said in defense of failure to utilize modern methods of diagnosis when they are accessible.

Slowly we are beginning to realize the relationship between good housing and health. Other agencies have taken the leadership in slum clearance and in the provision of good housing. It is not too late even now, because of the magnitude of the undertaking and the need from the health point of view, for health departments to concern themselves more actively with this subject.—John L. Rice, M. D., *Commissioner of Health, New York City*.

A man will talk much of his experience, and make the same mistake every day.

Simplicity and clearness are the eloquence of science.—*Macaulay*.

† Editor's Note.—This department of CALIFORNIA AND WESTERN MEDICINE, presenting copy submitted by Hartley F. Peart, Esq., will contain excerpts from the syllabi of recent decisions and analyses of legal points and procedures of interest to the profession.

## LETTERS†

Concerning Status of Privileged Communications in  
Relation to Representatives of the Armed Forces

(COPY)

August 27, 1942.

L. A. Alesen, M. D.,  
Secretary, Los Angeles County Medical Association,  
Los Angeles, California.

Dear Doctor:

Dr. Kress has forwarded to me your letter of August 24, 1942, and enclosures concerning an inquiry by a member of the Association who has been requested by Naval Intelligence to disclose information received by him from a patient in confidence.

From the correspondence, it is my understanding that the patient admitted to the physician that he had falsely represented his physical condition to the Navy in order to avoid Naval service. Of course, the question presented is whether or not the privileged nature of communications between physician and patient exists under the circumstances above set forth.

If the communication concerned service under the Selective Training and Service Act of 1940, then the physician would undoubtedly be under a duty to disclose the information received from his patient to the proper authorities. (*U. S. Code, Title 50, Sec. 311.*) A reason for this is that any assistance given to a person to enable him to evade military service is a criminal act.

Aside from the Selective Service Act, the privilege that the law accords to communications between physician and patient is limited to the extent that any communication made in furtherance of a criminal purpose is not privileged. (*70 Corpus Juris, 445.*) Under the circumstances set forth in your letter, it would appear that the patient obtained dismissal from the Navy on a falsified claim of illness. If this is so, the subject matter of the communication does relate to a criminal purpose because obtaining a discharge under false pretences violates the articles of government of the Navy.

Accordingly, under the circumstances set forth in your letter, it is our opinion that the physician is obligated to disclose to Naval Intelligence such information as he has in his possession and that he may not rely upon the "physician-patient privilege."  
111 Sutter Street.

Very truly yours,

HARTLEY F. PEART.

Concerning Hearing re: Minimum Wage Board for  
Professional and General Business Offices\*

(COPY)

Los Angeles, August 14, 1942.

To the Editor.—I understand that the enclosed notice will reach you between issues of your State Journal.

As the notice itself will explain, it is of importance to every professional man and I am forwarding it to you in the hope that there may be some other means of broadcasting it to your membership.

Thanking you for your coöperation,

Sincerely yours,

(Signed) DAVID W. McLEAN, D. D. S.

MINIMUM WAGE BOARD FOR PROFESSIONAL AND  
GENERAL BUSINESS OFFICES

A Minimum Wage Board has been appointed under

the Division of Industrial Welfare of the State of California, to set up rules and regulations to accompany the Minimum Wage Law in governing the employment of women in professional and general business offices of the State.

The Minimum Wage Board will consist of four employee members and four employer members. Of the employer group, two will be business employers and two, professional. The two professional members will be Mr. Clore Warne, an attorney, representing the non-health service professions, and David W. McLean, D. D. S., of Los Angeles, representing the health service professions.

Similar Minimum Wage Boards have recently set up rules governing the employment of women in the canning and other industries. It is now the turn of the professional and general business office fields.

Among the problems to be considered will undoubtedly be the following:

What skills and efficiency should reasonably be expected of women employees before they rate the minimum wage?

How long does it take to train an employee in the skills required in a dental office? a medical office? an osteopath's office, a chiropractor's? in various types of business offices?

What about overtime in the professional office? the business office? (The law requires that women shall not work more than eight hours per day, though in some industries which deal with perishable commodities, intermittent overtime is permitted.)

What about payment for overtime?

What should be the wage status of the part time employee?

The Public Hearing of the Minimum Wage Board, will be held in the Auditorium of the California State Building, 217 West First St., Los Angeles, on Tuesday, September 15, at 10:30 a.m. At this hearing any who wish may present arguments for either employers or employees.

## MEDICAL EPONYM

## De Musset Sign

The de Musset sign of aortic regurgitation was described, not by a physician, but by Paul de Musset (1804-1880), brother of the poet, in his *Biographie de Alfred de Musset; sa vie et ses oeuvres* [Biography of Alfred de Musset: His life and his works]. (Paris, 1877). The following translation is from pages 274 and 275:

"The illness so well cared for by Sister Marcelline had left him with a troublesome tendency to affections of the chest. . . . We called the doctors twice during the course of the winter; they bled him too often.

"Whatever they may say, I am convinced that their lancets caused him irreparable harm. At breakfast one morning in March, I noticed that my brother's head was bobbing involuntarily with each pulse beat. He asked my mother and me why we were looking at him with such a startled air. We told him what we saw, and he said, 'I did not think you could see it; but I will reassure you.'

"He made some sort of pressure on his neck with his index finger and thumb, and in a moment his head stopped marking his pulse. 'You see,' he then said to us, 'that this dreadful illness can be cured by simple and inexpensive means.'

"We were reassured, being ignorant, for we had just observed the first symptom of a grave malady to which he was to succumb fifteen years later."—R. W. B., in *New England Journal of Medicine*, Vol. 226, No. 12.

† CALIFORNIA AND WESTERN MEDICINE does not hold itself responsible for views expressed in articles or letters when signed by the author.

\* For other comment in this issue, see pages 172 and 209.

### NOMINEES FOR CALIFORNIA LEGISLATURE

A tentative list (almost complete at time of this writing), of candidates nominated for California State Senate and Assembly is given below. For other reference in regard thereto, see comments in this issue, on page 171.

#### California Senate

<i>District Number</i>	<i>Name of Candidate and Residence</i>	<i>Party Nomination</i>
2	Randolph Collier, 551 N. Main St., Eureka. Incumbent.....	(Democrat and Republican)
4	George M. Biggar, Covelo. Incumbent.....	(Democrat and Republican)
6	Charles H. Deuel, 273 E. Sacramento Ave., Chico. Incumbent.....	(Democrat and Republican)
8	Clair Engle, 1010 Jackson St., Red Bluff. District Attorney, Tehama County.....	(Democrat and Republican)
10	William P. Rich, Marysville. Incumbent.....	(Democrat and Republican)
12	Herbert W. Slater, 800 4th St., Santa Rosa. Incumbent.....	(Democrat and Republican)
14	John F. Shelley, 69 Beachmont Dr., San Francisco. Incumbent.....	(Democrat and Republican)
16	Arthur H. Breed, Jr., 1081 Clarendon Crescent, Oakland. Incumbent.....	(Republican)
18	Patrick William McDonough, 870 Longridge Rd., Oakland. Businessman.....	(Democrat)
16	M. G. Del Mutolo, 1731 Glen Una Way, San Jose. Assemblyman.....	(Democrat)
18	Byrl R. Salsman, 2030 Webster St., Palo Alto. Assemblyman.....	(Republican)
20	Bradford S. Crittenden, 145 E. Harding Way, Stockton. Incumbent.....	(Democrat and Republican)
22	Hugh P. Donnelly, 953 Sierra Dr., Turlock. Assemblyman.....	(Democrat and Republican)
26	Jesse M. Mayo, Angels Camp. Incumbent.....	(Democrat and Republican)
28	Charles Brown, Shoshone. Incumbent.....	(Democrat and Republican)
30	Hugh M. Burns, 3307 Huntington Blvd., Fresno. Assemblyman.....	(Democrat and Republican)
32	Frank W. Mixter, 303 E. Palm St., Exeter. Incumbent.....	(Democrat and Republican)
34	Jesse R. Dorsey, 1028 Q St., Bakersfield. Attorney.....	(Democrat and Republican)
36	Ralph E. Swing, California Hotel, San Bernardino. Incumbent.....	(Democrat and Republican)
38	Jack B. Tenney, 3201 W. 77th St., Los Angeles. Assemblyman.....	(Democrat and Republican)
40	Ed Fletcher, 869 Rosecrans Blvd., San Diego. Incumbent.....	(Republican)
40	Charles Calhoun Dail, 5936 Brooklyn Ave., San Diego. Salesman-manager.....	(Democrat)

#### California Assembly

<i>District Number</i>	<i>Name of Candidate and Residence</i>	<i>Party Nomination</i>
1	Michael J. Burns, 1644 Summer St., Eureka. Incumbent.....	(Democrat and Republican)
3	Lloyd W. Lowrey, Rumsey. Incumbent.....	(Democrat and Republican)
4	Albert M. King, Riverside Dr., Oroville. Attorney.....	(Democrat and Republican)
5	Ernest C. Crowley, Fairfield. Incumbent.....	(Democrat and Republican)
6	Allen G. Thurman, Colfax. Incumbent.....	(Democrat and Republican)
7	Richard H. McCollister, 77 Marguerite Ave., Mill Valley. Incumbent.....	(Democrat and Republican)
8	Chester F. Gannon, 3543 H St., Sacramento. Attorney.....	(Democrat and Republican)
9	Earl D. Desmond, 2022 22nd St., Sacramento. Incumbent.....	(Democrat and Republican)
11	Charles M. Weber, 219 N. Sutter St., Stockton. Incumbent.....	(Democrat and Republican)
12	James E. Thorp, Lockeford. Incumbent.....	(Democrat and Republican)
13	Francis Dunn, Jr., 1634 69th Ave., Oakland.....	(Democrat)
13	George J. Dugan, Jr., 2000 94th Ave., Oakland. Realtor.....	(Republican)
14	Randal F. Dickey, 3221 Thompson Ave., Alameda. Incumbent.....	(Republican)
14	Frank F. Burke, 2437 Roosevelt Dr., Alameda. Business Executive.....	(Democrat)
15	Bernard A. Sheridan, 3135 Sheffield Ave., Oakland. Incumbent.....	(Democrat and Republican)
16	Arthur W. Carlson, 12 Marlborough Ct., Piedmont. Incumbent.....	(Democrat and Republican)
18	Gardiner Johnson, 765 San Luis Rd., Berkeley. Incumbent.....	(Democrat and Republican)
19	Bernard R. Brady, 886 39th Ave., San Francisco. Accountant.....	(Democrat and Republican)
20	Thomas A. Maloney, 350 Missouri St., San Francisco. Incumbent.....	(Democrat and Republican)
21	Albert C. Wollenberg, 2748 Steiner St., San Francisco. Incumbent.....	(Democrat and Republican)
22	George D. Collins, Jr., 1456 Union St., San Francisco. Incumbent.....	(Democrat and Republican)
23	William Clifton Berry, 3747 20th St., San Francisco. Machinist.....	(Democrat and Republican)
24	Edward F. O'Day, 1353 Church St., San Francisco. Incumbent.....	(Democrat)
24	Ray McAfee, 532 Judson Ave., San Francisco. Public School Teacher.....	(Republican)
25	Gerald P. Haggerty, 155 St. Elmo Way, San Francisco. Insurance Broker.....	(Democrat and Republican)
26	Edward M. Gaffney, 2081 15th St., San Francisco. Incumbent.....	(Democrat and Republican)
27	Harrison W. Call, Eaton Dr., Redwood City. Incumbent.....	(Democrat and Republican)
29	John F. Thompson, Rt. 4, Box 299, San Jose. Farmer.....	(Democrat and Republican)
31	George A. Clarke, Le Grand. Incumbent.....	(Democrat and Republican)
32	Jacob M. Leonard, 470 Hawkins St., Hollister. Incumbent.....	(Democrat and Republican)
33	Fred Weybret, Arroyo Seco. Incumbent.....	(Democrat and Republican)
34	J. G. Crichton, 752 Buckingham Way, Fresno.....	(Democrat and Republican)
35	S. L. Heisinger, Rt. 4, Box 90E, Fresno. Incumbent.....	(Democrat and Republican)
37	Alfred W. Robertson, 1524 Garden St., Santa Barbara.....	(Democrat and Republican)
38	Walter J. Fourn, 315 Lupin Way, Ventura. Attorney.....	(Democrat and Republican)
39	Thomas H. Werdel, 2200 Pine St., Bakersfield. Attorney.....	(Democrat and Republican)
40	Ella Maude Milton, 1329 Pennsylvania Ave., Los Angeles.....	(Republican)
40	Wm. H. Rosenthal, 409 S. Boyle Ave., Los Angeles. Deputy City Attorney.....	(Democrat)
41	Julian Beck, 423 Hagar St., San Fernando. Attorney and Teacher.....	(Democrat and Republican)



District Number	Name of Candidate and Residence	Party Nomination
42	Everett G. Burkhalter, 11005 Morrison St., No. Hollywood. Incumbent.....	(Democrat and Republican)
43	C. Don Field, 1552 Ridgeway Dr., Glendale. Incumbent.....	(Republican)
43	Patrick Henry Ford, 933 Cumberland Rd., Glendale. Attorney.....	(Democrat)
44	John B. Pelletier, 248 S. Olive St., Los Angeles. Incumbent.....	(Democrat)
44	G. Harvey Mydland, 426 S. Hill St., Los Angeles. Property Management.....	(Republican)
45	Thomas J. Doyle, 4333 Griffin Ave., Los Angeles. Incumbent.....	(Democrat and Republican)
47	Charles H. Kelley, 1039 Sinaloa Ave., Pasadena.....	(Democrat)
47	Willis Sargent, 300 Bellfontaine, Pasadena. Lawyer.....	(Republican)
48	T. Fenton Knight, 4850 Oakwood Ave., La Canada. Incumbent.....	(Republican)
48	Virginia Timberlake Steinberger, 501 Mariposa Ave., Sierra Madre.....	(Democrat)
49	Lee T. Bashore, 250 Live Oak, Glendora. Incumbent.....	(Democrat and Republican)
50	Thomas M. Erwin, 1425 S. Central Ave., El Monte. Farmer.....	(Republican)
50	Dailey S. Stafford, 242 E. Center St., Covina. Attorney.....	(Democrat)
51	Elwyn S. Bennett, 918 S. Fraser Ave., Los Angeles. Attorney.....	(Democrat)
51	Francis J. Quigley, 6172 Fairfield St., Los Angeles. Lawyer.....	(Republican)
52	William H. Poole, 4817 Back Ave., Bell. Incumbent.....	(Democrat)
52	Jonathan J. Hollibaugh, 6908 Rugby Ave., Huntington Park. Councilman.....	(Republican)
53	Lothrop Smith, 568 N. Milton Dr., San Gabriel. Attorney.....	(Republican)
53	Hugo A. Norin, 717 Lindaraxa Pk., Alhambra. City Commissioner.....	(Democrat)
54	John B. Knight, 5224 Maywood, Eagle Rock. Incumbent.....	(Democrat and Republican)
55	Vernon Kilpatrick, 1246 S. Hope St., Los Angeles. Incumbent.....	(Democrat and Republican)
56	Ernest E. Debs, 2324 Teviot St., Los Angeles. Tax Statistician.....	(Democrat)
56	Kay Cunningham, 4327 Melbourne Ave., Los Angeles.....	(Republican)
57	Franklin J. Potter, 3277 Primera Ave., Hollywood. Incumbent.....	(Democrat and Republican)
58	Frank J. Waters, 959 Keniston Ave., Los Angeles. Incumbent.....	(Democrat and Republican)
59	Charles W. Lyon, 605 N. Oakhurst Dr., Beverly Hills. Incumbent.....	(Democrat and Republican)
60	Jesse Randolph Kellems, 454 Cuesta Way, Bel Air, Los Angeles. Incumbent.....	(Democrat and Republican)
61	Lester A. McMillan, 2726 Forrester Dr., Los Angeles. Attorney.....	(Democrat)
62	Augustus F. Hawkins, 220 E. 46th St., Los Angeles. Incumbent.....	(Democrat and Republican)
63	Dqn A. Allen, 3867 Degnan Blvd., Los Angeles. Incumbent.....	(Democrat and Republican)
64	John C. Lyons, 3208 Bellevue Ave., Los Angeles. Business Representative.....	(Republican)
64	Samuel William Yorty, 2575 W. 5th St., Los Angeles. Attorney.....	(Democrat)
65	John W. Evans, 4813 S. Western Ave., Los Angeles. Incumbent.....	(Democrat and Republican)
66	Edward D. McCoy, 1412½ W. 81st St., Los Angeles. Attorney.....	(Republican)
66	Jack Massion, 846 E. 77th St., Los Angeles. Incumbent.....	(Democrat)
67	Adele Arbo, 1412 W. 93rd St., Los Angeles. Vocational Advisor.....	(Republican)
67	Clayton A. Dills, 15145 S. Vermont, Gardena. Service Station Operator.....	(Democrat)
68	Vincent Thomas, 722 W. 20th St., San Pedro. Incumbent.....	(Democrat and Republican)
69	Ralph C. Dills, 1505 N. Spring St., Compton. Incumbent.....	(Democrat and Republican)
70	Lorne D. Middough, 233 Roswell Ave., Long Beach. Incumbent.....	(Democrat and Republican)
71	Fred N. Howser, 3940 Linden Ave., Long Beach. Incumbent.....	(Republican)
71	Arthur A. Allen, 669 E. Seaside Blvd., Long Beach. Deputy City Manager.....	(Democrat)
72	Eugene N. Nisbet, 200 E. 13th St., Upland.....	(Democrat)
72	R. Fred Price, 303 W. Emporia Ave., Ontario. Investments.....	(Republican)
74	Clyde A. Watson, 273 N. Harwood St., Orange. Incumbent.....	(Democrat and Republican)
75	Sam L. Collins, N. Cypress Ave., Fullerton. Incumbent.....	(Democrat and Republican)
76	Nelson S. Dilworth, Rt. 1, Box 18, Hemet. Incumbent.....	(Democrat and Republican)
77	Harvey E. Hastain, 277 W. K St., Brawley. Incumbent.....	(Democrat and Republican)
78	Mary L. Fay, 211 W. Walnut, San Diego.....	(Democrat)
79	Kathryn T. Niehouse, 4889 Bancroft St., San Diego.....	(Republican)
79	Paul A. Richie, 4264 Menlo Ave., San Diego. Incumbent.....	(Democrat)
80	Charles W. Stream, 664 Del Mar Ave., Chula Vista. Incumbent.....	(Democrat and Republican)

## MEDICAL EPONYM

*Islands of Langerhans*

These structures are described in an inaugural dissertation submitted in candidacy for the degree of Doctor of Medicine from the Friedrich Wilhelm's University at Berlin on February 18, 1869, by Paul Langerhans (1849-1888), entitled "Beiträge zur mikroskopischen Anatomie der Bauchspeicheldrüse [Contributions to the Microscopic Anatomy of the Pancreas]." This monograph was privately printed by Gustav Lange, of Berlin, in 1869. A portion of the translation follows:

"These cells are small and irregularly polygonal in form; their contents are quite homogeneous, glistening and without granules; the nuclei are clear, round and of medium size. Their average diameter is from 0.0096 to 0.0120 mm., and that of the nuclei from 0.0075 to 0.0080.

"These cells for the most part lie in clumps, peculiarly distributed in the parenchyma of the gland. If a pancreas that has been in Müller's liquid for two or three days is examined under low power, such as No. 4 objective in Hartnack's system, there will be observed regularly scattered in the gland rounded spots stained a deep yellow, about one to a field when a No. 3 ocular is used. Under higher powers, it is evident that these spots consist entirely of our cells. They are heaped up in rounded clumps, regularly distributed in the parenchyma (in the old meaning of the word) of the gland. The clumps have for the most part a diameter of 0.10 to 0.24 mm., and can easily be perceived even in teased preparations made either from fresh glands or from those that have been treated for a short time with iodine serum."—R. W. B., in *New England Journal of Medicine*.

## TWENTY-FIVE YEARS AGO† BOARD OF MEDICAL EXAMINERS OF THE STATE OF CALIFORNIA†

### EXCERPTS FROM OUR STATE MEDICAL JOURNAL

Vol. XV, No. 9, September, 1917

#### EXCERPTS FROM EDITORIAL NOTES

*The Quota of Doctors for the Army.*—There are about 150,000 physicians listed in medical directories. Deducting from these 50,000 who are not in practice, or are physically incompetent, leaves 100,000 doctors available. Of this number the Surgeon-General requires 20,000, or one-fifth of the active practitioners as officers in the Medical Reserve Corps of the army. [In September, 1917.] This means that one out of every five physicians in California is needed in the Army and *must go at once*. Every reader of this page is urged most seriously to see that the profession in his vicinity is represented at least in proportion. . . .

The need of doctors is not alone for the mobile army, but also in concentration camps, evacuation hospitals, base hospitals and on transports. It is of decided advantage to volunteer your services, and receive the benefit of the very necessary training accorded physicians in medical training camps. It is a safe assumption that for those who receive such training and show their aptitude for the service, advancement will be rapid.

*Danger from Botulism.*—In this present national crisis one of the chief topics of interest to the average citizen has been the rapidity with which staple articles of diet have risen in price until they are almost beyond the reach of the small wage earner. In order to combat the "high cost of living" and to conserve such foods as can be shipped to our allies in Europe, there has been a widely advertised propaganda, urging that all who have access to the fresh material should provide for the coming winter by canning vegetables and fruits at home; and the leading newspapers have cooperated with the authorities by publishing detailed descriptions of how the canning process should be carried out.

It is probable that much larger quantities of fruits and vegetables are being canned at home this year than ever before, and that many persons will be depending upon home-canned foods who have formerly used only commercially-canned products. It is urgent, therefore, that the medical profession should be alert to the danger which may arise from poisoning from foods which have been improperly preserved.

One of the most important types of food poisoning in California in recent years is due to the toxin of the *Bacillus botulinus*, which, as has been shown by Dickson, may be produced in home-canned vegetables and fruits. . . .

*Red Cross Units.*—Last month attention was called to the opportunity afforded by the Red Cross for physicians at home, as well as for those able with better fortune to serve with the fighting forces of the nation. For the purpose of service with the army, or for purposes of training personnel, there are various Red Cross units available in which a man of any capability, or of any inclination or special training, can find valuable and useful employment. . . .

*Editorial Comment.*—We have thus far received no  
(Continued in Back Advertising Section, Page 24)

†This column strives to mirror the work and aims of colleagues who bore the brunt of Association activities some twenty-five years ago. It is hoped that such presentation will be of interest to both old and new members.

By CHARLES B. PINKHAM, M.D.  
Secretary-Treasurer

#### Board Proceedings

A regular meeting of the Board of Medical Examiners was held in the Elks Club, Los Angeles, July 27 to 30, 1942, inclusive.

Approximately 124 applicants, including all classes excepting midwives, wrote the examination. Among the list were several graduates of foreign medical schools, who wrote the examination for physician's and surgeon's certificate.

The following changes in status were made by the Board:

*Gerber, Rudolph H.* (Naturopath) License revoked July 30, 1942;

*Harris, Frederic Douglas, M.D.* License revoked July 29, 1942;

*Hendley, Charles, M.D.* License revoked July 29, 1942;

*MacRae, Herbert Bennett, M.D.* On July 29, 1942, found guilty of the charges preferred in the complaint and the imposition of penalty was deferred to the October, 1942, meeting in Sacramento;

*Miller, Joseph E., M.D.* Found guilty at the prior San Francisco meeting of charges as set forth in the complaint and on July 28, 1942, was placed on five years probation, without narcotic privileges or possession;

*Rinker, Casper L. A., M.D.* License revoked July 28, 1942;

*Schneerer, Theodore, M.D.* Found guilty on two charges and license revoked July 30, 1942;

*Wright, George Ainsley, M.D.* Found guilty on two charges and license revoked July 29, 1942.

The following licenses, heretofore revoked, were restored:

*Duchain, Marie E.* (midwife). Restored July 27, 1942, and placed on probation for a period of five years—to report at each summer meeting in Los Angeles;

*Kaufman, Morris P., M.D.* (revoked Oct. 28, 1938); license restored July 27, 1942, and he was placed on probation for a period of five years without narcotic privileges or possession.

#### News

"The finding by the Federal Trade Commission of false advertising claims made in medical journals by the John J. Fulton Company of San Francisco concerning its product 'urvursin,' was upheld yesterday by the Circuit Court of Appeals. The commission had ordered the company to desist from advertising the product as a treatment for diabetes, after finding it, according to the opinion of Judge William Healy, 'largely a compound of herbs long enjoying a reputation, particularly in folklore medicine, for the treatment of urinary conditions,' but 'illusory' in its effect on diabetes cases." (San Francisco Recorder, July 22, 1942.)

The Los Angeles Journal of July 9, 1942, under Articles of Incorporation, related that the Chiropractic College of America, City of Los Angeles, has filed a certificate of amended copy, changing its name to the California College of Natural Healing Arts.

(Continued in Back Advertising Section, Page 32)

†The office addresses of the California State Board of Medical Examiners are printed in the roster on advertising page 6. News items are submitted by the Secretary of the Board.